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RUNNING HEAD: U.S. Beneficiary Satisfaction at Korean Hospitals

U.S. Outpatient Beneficiary Satisfaction at Korean Hospitals

A Graduate Management Project in partial fulfillment of the requirements for a Master Degree in
Health Administration

By
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ABSTRACT

Nearly 6,000 TRICARE beneficiaries per annum receive outpatient medical care in one of 24 Korean hospitals within the Republic of Korea (ROK). The objective of this project was to determine TRICARE U.S. outpatient beneficiary satisfaction at Memorandum of Understanding (MOU) Host Nation Hospitals (HNH) in the Republic of Korea. The point of service survey used for this project was aligned with the Department of Defense (DoD) MHS's Army Provider Level Satisfaction Survey (APLSS). The survey utilizes a Likert 5-point scale system. The setting included medical facilities within the ROK that participate under a MOU with the 18th Medical Command. The sample included TRICARE beneficiaries referred for outpatient care to Samsung, Dongsan, and Dankook hospitals, from September-November 2007. The analysis measured overall patient satisfaction as it relates to beneficiary category, gender and command sponsorship. The project data was utilized to verify and/or identify potential target areas of patient satisfaction.

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INTRODUCTION

Background

The Command Structure and Population

There are more than 80 Army installations, 18 Air Force sites, and two Navy facilities with an estimated 37,500 US military personnel assigned throughout the 98,480 sq km Republic of Korea (ROK) (U.S. Forces Korea, 2007; South Korea, 2007). There are three major commands with the ROK. The United Nations Command (UNC) has the mission to maintain the provisions of the truce or Armistice Agreement, established 27 July 1953 between North and South Korea. The Combined Forces Command (CFC) has the mission to "Deter hostile acts of external aggression against the Republic of Korea by a combined military effort of the United States of America and the ROK; and in the event deterrence fails, defeat an external armed attack against the ROK" (U.S. Forces Korea, 2007, p. 1). Finally, the United States Forces Korea Command (USFK), which commands all United States Forces in Korea, which includes five component commands with over 17 subordinate commands. The USFK Commander serves as the Commander of the United Nations Command and Combined Forces Command (Global Security, 2007).

The largest component command within the ROK is the Eighth United States Army (EUSA). Its mission is to "support deterrence of North Korea aggression against the ROK. Should deterrence fail, Eighth United States Army supports Non-combatant Evacuation Operations (NEO), transitions to hostilities, generates combat power to support UNC and CFC 's campaign, and provides combat support and combat service support to assigned, attached, and other designated forces within the Korean Theater of Operations. On order, conducts combat operations" (Mission of the EUSA, 2006, p. 1).

The Korean peninsula is divided into several geographic areas, as seen in Appendix A, with the majority of personnel residing in the Seoul-Yongsan area (approximately 11,400 according to Personnel Information Management System Korea (PIMSK, 2007). This area included the largest portion of command sponsored family members (nearly 70% or 2,413 of the 3,504 command sponsored family members- (PIMSK, 2007). The command sponsored program helps to stabilize critical positions within the ROK by authorizing family members to accompany the service member and receive full benefits (e.g., housing, school, medical, dental) throughout their ROK tour of duty. As of April 2007, there are approximately 53,000 personnel within the ROK in which the USFK has the responsibility to ensure medical care is both available and accessible (PIMSK, 2007). Of the 53,000 personnel, 32,000 active duty and command sponsored active duty family members are enrolled in the military health system's health plan, TRICARE. There are an estimated 23,000 personnel (including non-command sponsored active duty family members, Department of Defense (DoD) civilians, contractors, retirees and their families) within the ROK, not enrolled in TRICARE.

Healthcare Delivery

The 18th Medical Command, one of the 17 subordinate commands, is also accountable to be aligned with the military health system's mission: "To enhance DoD and our Nation's security by providing health support for the full range of military operations and sustaining the health of all those entrusted to our care" (Office of the Assistant Secretary of Defense for Health Affairs, 2003, p. 1). As such, the mission of the 18th Medical Command is to "Ensure integrated and comprehensive Theater Health Support (THS) to all beneficiaries throughout the Korean Theater and across the entire spectrum of operations" (18th MEDCOM mission, 2003, p. 1). The 18th Medical Command's subordinate units throughout the ROK include: the 121st Combat Support

Hospital (CSH), the 168th Area Support Medical Battalion (ASMB), the 618th Dental Company, the 16th Medical Logistics Battalion, a veterinarian detachment and several medical detachments. Together, 121st CSH and 168th ASMB are identified as the Integrated Healthcare Organization (IHO) responsible for the healthcare delivery throughout the entire ROK.

The 121st CSH is a community-type hospital with the dual missions of supporting field medicine and community-based medicine throughout the ROK. The 121st CSH has an in-patient capacity of over 60 beds with outpatient services to include: medical, surgical, obstetric, gynecological, pediatric and psychiatric care. Care is provided to all active duty personnel and their family members, as well as, government-employed civilians, contractors and their family members. Many specialty services are not available; those requiring medical care beyond the capabilities of the 121st CSH are referred to Host Nation Hospitals (HNN) and/or evacuated to other military hospitals outside the ROK. The IHO is comprised of approximately 2,600 staff members (1,900 military, 450 government service (GS), Korean government service and volunteers, 210 Korean Service Corps and 40 contract staff (Jolissaint, 2007). In fiscal year 2007, the IHO had 302,346 total outpatient visits, averaging over 1,100 visits per day, further broken down into beneficiary categories in Figure 1.

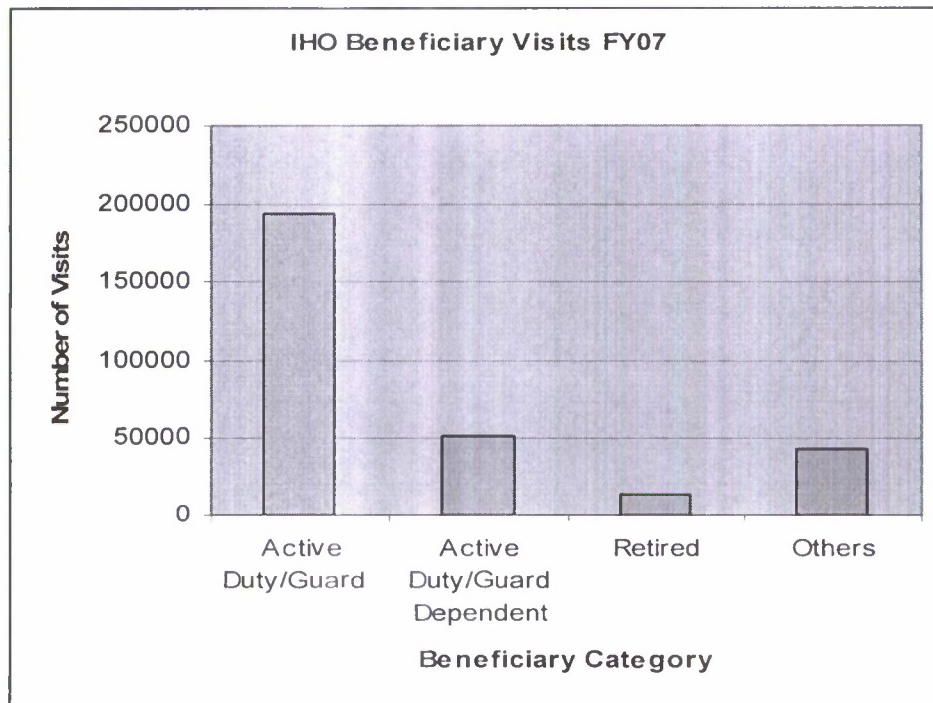


Figure 1. IHO FY2007 total outpatient patient visits (M2, 2 March 2008).

Top outpatient services by volume for the IHO are: Primary Care, Physical Therapy, Emergency Care, Occupational Health and Optometry. Inpatient top services include: Orthopedics, General Surgery, OB/GYN and ENT (M2 data-pull, April 2007). The units that comprise the IHO participate in numerous community activities including health fairs, town hall meetings, well-being councils, school support, and alliance health programs with Republic of Korea. The IHO is a key participant for several resource demanding (i.e., medical staffing requirements) major exercises and training events each year. The IHO's mission is both complex and demanding. A typical workload for the IHO during a duty day can be seen in Figure 2.

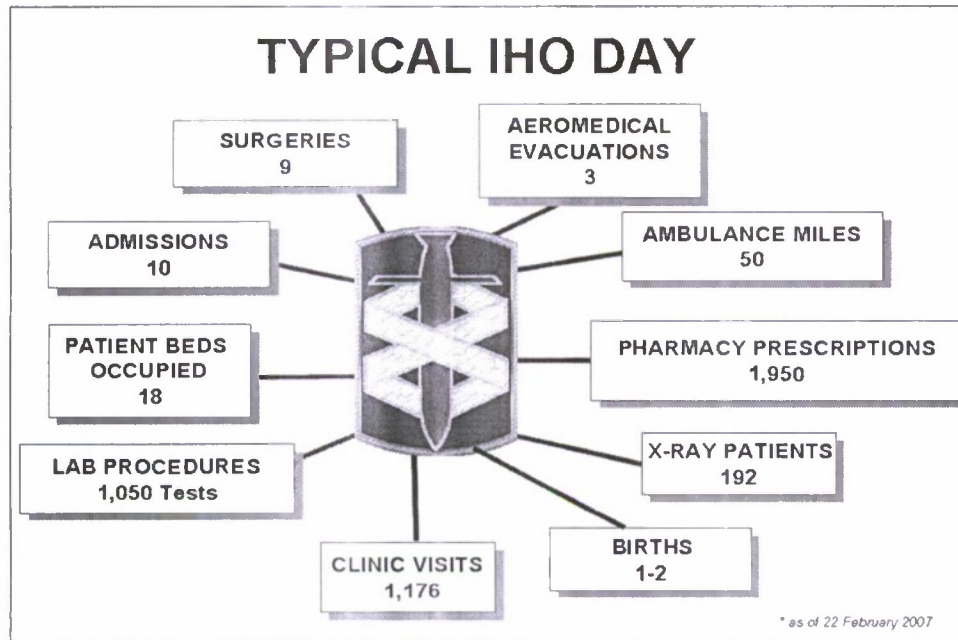


Figure 2. Typical daily workload within the IHO (Jolissaint, 2007).

The Health Plan (TRICARE)

The military health system's unique health plan for military members and their dependents is called TRICARE. TRICARE manages this healthcare plan in coordination with organic military medical infrastructure along with a vast worldwide network of civilian counterparts. As of January 2007, TRICARE has over nine million eligible beneficiaries, 65 military hospitals, 412 medical clinics and over 400 dental clinics worldwide (TMA, 2007). TRICARE benefits have continued to increase since its inception. As of April 2006, the TRICARE network includes nearly 250,000 physicians, every U.S. hospital and 55,000 retail pharmacies. An independent survey shows TRICARE ranks as one of the Nation's best health plans (Quadrennial Defense Review, 2006).

Many military treatment facilities, especially overseas, are continually becoming unable to meet the demand of the beneficiaries (primary and specialty care) due to limited resources and mission priorities (e.g., the military has a unique wartime mission). TRICARE and its managed

care business practices (responsible for the care of its beneficiaries, regardless of location) allows for patients to be referred outside the military treatment facility for care. In the overseas environment this implies that patients are and will continue to be referred to HNH. Current agreements with TRICARE and HNH require families that are non-command sponsored within the ROK to pay all upfront medical expenses when care is received through a host nation hospital (Philpott, 2006). In many cases this causes financial hardship for families and satisfaction challenges for the healthcare plan. "The amount of money a patient has to incur out of pocket has a direct influence on their assessment of healthcare received" (Aday, 1996, p. 15).

The Korean Healthcare System

The ROK is a heavily populated country resulting in high levels of congestion in the larger cities. According to the Population Reference Bureau, the ROK has an extremely high population density of 487 people per square kilometer compared to 31 people per square kilometer in the United States (Population Reference Bureau, 2007). A few additional facts on the ROK's healthcare, as seen in Appendix B include: 66 beds per 10,000 people (33 U.S.), 1.57 physicians (2.56 U.S.) and 1.75 nurses (9.37 U.S.) per 1000 people (Population Reference Bureau, 2007; World Health Organization, 2006). Throughout the ROK, medical care is delivered and managed via a National Health Insurance system. "The quality of Korean healthcare is excellent and many healthcare providers speak English" (United States Naval hospital, 2007, p. 1). Healthcare delivery within the ROK is accomplished via a three-tiered system based upon bed capacity and capabilities of the facility (i.e., third tier includes facilities with greater than 700 beds) (Cho, Lee, Kim, Lee & Choi, 2004). Koreans have free access to any first or second tier medical facility, to include providers and specialists working in those facilities; referrals are required for tier three facilities (Choi, Kim & Lee, 1998). As such, the

Korean healthcare delivery system lacks a primary care base, which leads to many efficiency and patient satisfaction challenges. In an attempt to address these challenges, several quality improvement initiatives within the ROK were developed (e.g., establishing Quality Management Departments). In addition to the ROK being a male-dominated society, there are many cultural differences when compared to the U.S. healthcare delivery system. Within the ROK, families play a critical role in the care and recovery of their hospitalized family members. Family members stay an extended period of time taking care of their loved ones, doing many of the daily living activities/support a licensed practical nurse (LPN) may do in the U.S. There are no LPNs and by design a short supply of nurses for this reason. Many of the large medical facilities in the ROK were designed via U.S. architectural firms with the intent to make the hospital, less like a hospital. Facilities are designed to have a community feel with social, food and shopping mall areas. The majority of Korean hospitals are on the cutting edge of leveraging information technology in the healthcare environment. Korean hospitals utilize a paperless, electronic medical record system, however U.S. patient information is not accessible in either direction; hard copy information is the primary means of documenting, recording and transmitting (back to the IHO) a U.S. patient's medical information in the HNH.

HNH Memorandums of Agreement

The demanding workload and pace within the Korean theater of operations, coupled with the large beneficiary population results in a continuous challenge to retain sick or injured beneficiaries within the theater. "There were daily medical evacuation flights costing vast amounts of money and lost productivity (and operational readiness), prior to having the MOUs" (Choi, 2007, p. 1). Challenges to decrease the numerous and costly medical evacuations continue to be a priority in healthcare delivery within the theater. TRICARE has as an

established and published set of access to care standards. Congress mandated, under the Defense Authorization Act of 1999, that the military health system meet the following access to care standards for its beneficiaries: acute care within 24 hours, routine care within one week, specialty care within four weeks and wellness care within four weeks (Corey, 1997).

In order to meet the demands of the beneficiary population, establish billing procedures and remain within TRICARE access to care standards, the Memorandum of Understanding (MOU) program was established with ROK HNHs. The ROK MOU program allows for those U.S. beneficiaries under TRICARE Prime to seek care without the concern of upfront expenses; TRICARE will pay the bill once it is processed and received. Requirements for TRICARE Standard (non-command sponsored) beneficiaries require full payment at the time of discharge. The MOU program began on October 28, 1999 with Dankook University Medical Center in Pyungtaek, South Korea and continues today, with the 24th MOU established with Yeungnam University Medical Center in Daegu, South Korea on 17 August 2007. Many of the MOU HNHs are teaching hospitals with the latest medical techniques and technologies. These MOU facilities are located throughout the Korean Peninsula to ensure a continuity of care as seen in Appendix A. These MOU facilities take IHO overflow cases and emergent care when needed, but the referral demand is primarily specialty care (i.e., Neurosurgery, Cardiology and Urology) not available via the IHO. Top outpatient referrals to MOU facilities include: MRI, Urology, Ultrasound, Obstetrics and Physical Therapy (Patriek, 2007).

The MOU program continues to save money, increase beneficiary morale (i.e., town hall meetings and patient feedback), increase operational readiness (retaining personnel locally), and return personnel to duty in a short period of time (Choi, 2007). The overseas military health system, due to demand and resources, has and will continue to lack many in-house specialty

services, for this reason, such services will continue to be referred out to HNH. Forgoing costly and lengthy travel for care has saved the military health system millions of dollars (Allen & Little, 2007). The MOU agreements clearly establish responsibilities and coordination requirements for both the IHO and the HNH. These agreements state several requirements including: quality assurance, patient assessments and various surveys. HNH are carefully chosen based on their capabilities and the needs of the beneficiary populations they may serve. Officials in both regions agree that the HNH have repeatedly done an excellent job (Allen & Little, 2007; Choi, 2007). Host Nation Hospitals are inspected and approved via the IHO Deputy Commander for Clinical Services (CMO) and the Commander (CEO) of the IHO. Compliance inspections take place throughout the year on a scheduled basis.

Conditions Which Prompted the Project

The Department of Defense's Military Health System has set patient satisfaction targets for all military treatment facilities, however when U.S. outpatients are cared for outside a military treatment facility (as in the Republic of Korea) patient satisfaction has not been successfully monitored or measured. In November of 2000, the IHO developed and implemented a survey to capture and report patient satisfaction data for those U.S. beneficiaries receiving care as an outpatient in one of the several HNHs. The MOU HNH satisfaction survey, as seen in Appendix C, historically, has experienced a poor response rate (< 4%) and did not appropriately collect, analyze and monitor the data for appropriate action by healthcare leadership (Patrick, 2007). "When a Military Health System (MHS) beneficiary, USFK employee, or family member is sent to a Korean hospital, our most significant concern is the quality of care they will receive" (18th Medical Command MOU Hospitals, 2007, p. 1). Beneficiaries are promised a predetermined level of cost, access, and quality healthcare by their health plan, TRICARE. In order to ensure

the health system is compliant, data must continuously be collected and analyzed. This data is additionally required for the development of future managed care contracts. Patient satisfaction requires having a system to continuously identify beneficiaries' perceptions and expectations (further defining this construct, patient satisfaction) allowing leadership and planners to react appropriately. Mangelsdorff suggested patient satisfaction as a criterion for measuring quality of care (Mangelsdorff, 1979). Patients are becoming more and more informed on medical intervention and delivery. Patients understand what board certification and accreditation implies of a medical treatment provider or facility; this information is linked to quality care (Roizen, Oz, & Joint Commission, 2006). Patient satisfaction is considered an outcome of quality care (Cho, Lee, Kim, Lee & Choi, 2004).

The military's health system is under ever increasing pressure to provide quality patient care within established access standards while simultaneously reducing its expenditures. Political scrutiny continues to be placed on the expenditures and outputs of the system. The private sector medical facilities are ready to take over the majority of the medical delivery mission. Overseas medical treatment facilities share the same concerns; however they encounter unique challenges due to their location and operating environment (e.g., lack of a managed care contract, language challenges, limited resources and access of specific services).

Private businesses must understand the needs and expectations of its customers and the military health system is no different. Customers, especially in healthcare, are the driving force in formulating the needs of an organization to include, staffing and financing. It is understood that the IHO alone does not have the infrastructure or services to ensure access to care standards are met for all eligible beneficiaries (current and future). Monitoring and more importantly understanding military patients' satisfaction with the delivery of healthcare has become a crucial

part in comparing both military and non-military (which continue to grow) providers that are a part of the TRICARE program (Tucker & Adams, 2001). TRICARE requires the IHO to maintain the same standards (including access to care standards) as military medical facilities within the states, which serves as a driving force to obtain and maintain HNH MOUs. As the stabilization movement continues in the Republic of Korea (e.g., increasing command sponsored authorizations), the healthcare needs, primarily specialty care, of its beneficiaries will continue to grow. Monitoring beneficiaries' perceptions, needs and expectations may provide valuable information to IHO and HNH leadership. This information may provide additional insight about the host nation medical provider; do they understand the U.S. population's culture, expectations and perceptions about health care and its delivery.

Military medical treatment facilities (MTF) must, now more the ever, closely monitor patient satisfaction in order to meet, maintain and change accordingly with their beneficiaries' needs. This is a critical portion of all MTF strategic and financial planning. The Department of Defense's Military Health System has ongoing patient satisfaction surveys. One is an Inpatient Customer Satisfaction Survey for inpatients receiving care at a military treatment facility and the other, a Purchased Care Outpatient Visit Satisfaction Survey (or APLSS as seen in Appendix D), for outpatients receiving care at a network or contract provider outside the military treatment facility. As this project focuses on the outpatient, APLSS appears as method of choice to capture satisfaction information. However, the APLSS it is not utilized within the ROK to collect satisfaction data from U.S. outpatients referred to MOU HNHs (New Surveys, 2000). The MOU HNH satisfaction survey's success is critical for managing beneficiary satisfaction when beneficiaries receive medical care outside the military MTF. The IHO needs this data to adequately measure and monitor their entire population. This patient satisfaction data may

provide an excellent quality indicator(s) for future planning of the capabilities and services offered by the IHO with ability to compare with similar APLSS data.

The ICE or Interactive Customer Evaluation used throughout the Department of Defense (DoD) allows customers to rate products and services provided by DoD offices and facilities worldwide. The ICE survey questions, prior to December 2007, were similar to the IHO and APLSS surveys, including the 5-point Likert scales. Although the ICE and APLSS collect patient satisfaction data, they do not communicate with one another. The IHO Patient Advocate monitors the ICE system as well as the APLSS system. The Patient Advocate collects data from both systems independently, along with the internal comment cards in order to report to the IHO leadership monthly and on an as needed basis. Prior to December 2007, the ICE Host Nation Referral Comment Card (Appendix E) has experienced a poor response rate, with less than 200 responses over the past five years (out of an estimated 30,000 referrals) (Robbins, 2007). In December 2007 the ICE Host Nation Referral Comment Card was updated with the same questions (as the MOU HNH Survey) to supplement the hard copy survey, while providing an additional means (online) for beneficiaries to report patient satisfaction.

Ensuring an organization's customer base is and remains satisfied is crucial in order to endure and develop in today's complex environment; the business of healthcare is no different. The Commander of the IHO continues to place patient satisfaction as a priority within the IHO organization, stating in all staff-newcomer orientations that one of the IHO's priorities is to bring about a positive reaction in all our customers (Jolissaint, 2007). Dissatisfied patients often hold critical improvement information. Healthcare, more than any industry, must continuously determine how satisfied its customers are, view trends, establish changes, and assess changes made. Leaders can truly capitalize knowing what is important to customers by their feedback.

Statement of the Problem

The IHO HNH survey was not being effectively utilized in the collection, analysis, reporting and monitoring of referred, outpatient U.S. beneficiary's satisfaction after receiving care at a HNH. Although the survey exists, the surveys themselves have fallen short in advertising to the beneficiaries as an available means to report their satisfaction. Surveys, prior to this project, that were collected were unsuccessful in having their data collected, reviewed, analyzed and reported. The MOU HNH survey must be re-energized and marketed to the beneficiary population. This data is critical in order to determine whether or not HNH beneficiary satisfaction meets the DoD's and military health system's 95% (satisfied) target for overall satisfaction with provider. Additionally, the MOU HNH survey may provide needed data to determine and track U.S. beneficiary overall satisfaction with HNH facility visit. Timely and statistically analyzed (and in accordance with the organization's needs) satisfaction data may improve healthcare delivery to our beneficiaries and working relationships between the IHO and the HNH; this is also a requirement under the current MOU agreements. Delivering the full scope of healthcare to our beneficiary population in the ROK continually proves to be a challenge given the allocated resources provided to the military healthcare system within the Korean Peninsula. Personnel shortages, inability to provide the full range of specialty care, the geographical location, and the continued scrutiny of healthcare expenditures create obstacles for the quality and access the military health system promises its beneficiaries. As the demand for outpatient services continues, the requirement to maintain MOUs with HNH becomes a critical piece in the delivery of healthcare in Korea. As seen in Appendix F, the challenge to maintain TRICARE access standards for the ROK beneficiary population is real and has led to several measures, all involving a close and continued partnership with its MOU HNH. Utilizing HNH does not

release the military health system of this TRICARE promise. The IHO has an internally designed survey, yet it is missing a systematic and standardized means to analyze measure, share and appropriately utilize the patient satisfaction data. Historically, the survey never received greater than a four percent response rate (Patrick, 2007). Determining differences in satisfaction amongst beneficiary categories is an area of particular focus. Data from the internal survey was rarely compared against itself to demonstrate potential trends or indicators. Additionally, this data was not shared with HNH leadership. All involved parties (IHO and HNH leadership) require this data to identify both successful and unsuccessful processes and systems and incorporate process improvement where needed (Patrick, 2007). One cannot improve, nor properly monitor, organizational conditions, objectives and goals without being able to quantify and measure them. Leadership and providers do not have timely and therefore, typically not actionable feedback. Without feedback, it is difficult to improve the system and care received.

Literature Review

Patient satisfaction research, studies, recommendations, definition, designs and opinions are clearly abundant throughout the world. As such, it is understood and expected that differences exist throughout these works. Although differences do exist, this literature review uncovered a common thread. That thread of similarity is found in the intent of measuring, monitoring and reporting this data and that collecting, understanding and reacting to patients' (customers') needs, wants, perceptions and expectations are critical to future growth and success of any organization. Just as a customer decides on which computer system to purchase, the patient, now more than ever, has control to make healthcare decisions; providers' only influence the decision. Understanding what the patient expects is critical. Satisfaction is tracked in nearly every industry, especially within the United States. Korea in 1995, after consumers, healthcare

professionals and portions of the Government continued pressures on hospitals for lack of quality of care; the Government instituted the Hospital Services Evaluation Program. The outcome of this program resulted in a wave of quality initiatives to include the establishment of Quality Departments within the hospitals (Cho & Kim, 2000). In a 1996 Korean study, nearly all of the 235 general hospitals examined already had in place or, for those who did not, planned to conduct patient satisfaction surveys. Those that planned to do so had to overcome obstacles such as: lack of leader interest, lack of an adequate survey, unable to confirm reliability and validity and lack of skill sets necessary to statistically analyze and report the data (Lee, Kim, Cho & Lee, 1998). The Joint Commission, the National Committee for Quality Assurance, Health Plan Employer Data and Information Set (HEDIS)- which has several measures addressing satisfaction, the Centers for Medicare and Medicaid (CMS), the International Organization for Standardization, along with several other agencies consider patient satisfaction particularly important (White, 1999). Healthcare perceptions and expectations of patients are real; they do exist and may influence a patient's overall satisfaction of their medical care and experience.

What is Patient Satisfaction and What Influences It?

Defining satisfaction continues to affect our quality-focused health care culture. An expert in the field of quality improvement once stated that to begin measuring an item without firmly knowing what it is you are measuring "is to court disaster" (Donabedian, 1988, p. 1).

Satisfaction is an attitude and an assessment of service received. "Its main purpose is to identify problems in the provision of care that may be improved by managerial intervention" (Fitzpatrick & Hopkins, 1993, p. 3). Providers' value patient feedback, providing the feedback is timely and actionable (Army Office of the Surgeon General, 2007). Patients too, value feedback and timely information. Robbins (Robbins et al., 1993) discussed a strong (positive) correlation with the

amount of information patients received from their providers during their visit and their satisfaction. A purchaser of a consumer good or product expects a high level of customer service throughout the buying experience. Patients are no different; they too, expect a high level of customer service throughout the continuity of care received (and purchased). This consumer driven market is pressuring healthcare leaders to exploit all the potential opportunities it has to interact with its patients (customers) to ensure a total positive/satisfied experience (Spiegelman & Sensor, 2008).

A country's culture may influence satisfaction; in Korea, gender and age are key determinants on how the society cares for a patient. Healthcare can be viewed from several perspectives. The culture within Korea (and much of Asia) is strong in tradition and history; it holds elders in high respect and males in a higher status than females. To the U.S. beneficiary, the Asian culture has an influence on host nation medical staff and standards of care. For example, nursing standards vary, often requiring family members to take on a more active (compared to a U.S. hospital) role in the care and recovery of their family member (e.g., feeding and bathing). A Naval executive officer, Captain Gerald R. Cox stated, "Another difference is the attitudes of some doctors, particularly older doctors, who may seem to be more paternalistic in their relationship with patients" (Allen & Little, 2007, p. 3). A patient's pain management and food, in a HNH, are key concerns for referring military doctors. "For pain management...there is a cultural difference in the area of pain perception and management, but we are steadily making improvement. Air Force, Lieutenant Colonel Catherine Bard stated, "It is not uncommon for patients to complain about hospital food in the States...food served in most HNH is different, but it is nutritious" (Allen & Little, 2007, p. 4).

The provider-patient relationship is the most influential factor for patient satisfaction (Westaway, Rheeder, Van Zyl & Seager, 2003). The majority of literature reviewed agrees that the relationship between the patient and provider has an impact on a patient's satisfaction. The provider-patient relationship, a unique challenge in itself, is considered crucial to appropriate health care delivery and it affected by culture and an individual's background. Just as a provider's background influences the manner in which they diagnose and treat a patient, a patient's background (to include their perceptions and expectations) influences their actions and behaviors towards their provider and care (Givaudan, Pick, DeVenguer & Xolocotzin, 2002). Patient perceptions influence satisfaction. "Patients constantly judge the motives and competence of caregivers through their interaction with them. This judgment is a very personal one, based on perceptions of care being responsive to patients' individual needs, rather than to any universal code of standards" (Wolosin, 2007, p. 4). Patient satisfaction is higher when health education and discussion with provider takes place during a patient's visit (Robbins et al., 1993). Age (older, more satisfied), education (more education, more satisfied), and level of health and illness of the patient (healthier more satisfied), ethnicity (minorities less satisfied), the provider-patient relationship and the size of the hospital have been found to influence a patient's satisfaction (Cheng, Yang & Chiang, 2003; Wright, et al., 2006). A study by Finstuen and Mangelsdorff also noted that age and health status affected levels of patient satisfaction for care received in military treatment facilities (Mangelsdorff & Finstuen, 2003). Older patients consistently reported higher levels of satisfaction, gender did not influence satisfaction, however, ongoing issues with communication negatively influences satisfaction levels (Baker, 1993). Patient satisfaction studies among genders has produced mixed results, and depending on the report you view, women or men may be significantly more satisfied or that there may be no

significant relationship at all (Wright, et al., 2006). As seen throughout this review, a majority of literature did not find a correlation with satisfaction and gender, although a few did. For example, Cho (Cho, Kim, Chi & Kanho, 2007) found older, female, married and less-educated individuals are more likely to be satisfied. A Department of Veterans Health Administration study, found that women were consistently more satisfied with continuity of care and prescription services and less satisfied with location of care, than men (Wright, S., Craig, T., Campbell, S., Schaefer, M., & Humble, C., 2006). Early studies of military health system (TRICARE) beneficiaries indicated that they were usually satisfied with care, though higher levels of satisfaction were reported for those receiving care away from the military treatment facility (e.g., highest satisfaction in retiree personnel and lowest in active duty dependents) (Mangelsdorff, 1994). White (1999) provides good reason to not group scores together as the APLSS does, as it discovered patients who perceived their health as 'very-good' had high levels of satisfaction ('neutral' rating had the lowest levels); grouping or generalizing provides room for error. Quintana (Quintana et al., 2006) found men with high levels of satisfaction were influenced by comfort, visiting and intimacy. Providers who are capable of identifying and understanding a patient's feeling were shown to have higher levels of satisfaction. Patients whom experience a smooth continuity of care have high levels of satisfaction (Fitzpatrick & Hopkins, 1993; Bell & Krivich, 2000). When the IHO is unable to meet the access to care standards promised to its beneficiaries with internal resources, the IHO refers its beneficiaries to one of 24 MOU HNH to ensure its promised access to healthcare. Access to care has shown to be an influencer on patient satisfaction (DuBoyce, 2008).

The majority of HNH doctors can communicate in English (i.e., many trained in the U.S.), however the nursing staff may not be able to, as their training is primarily held in their host

nation and does not center on English (Allen & Little, 2007). One provider and medical professor stated, “to provide safe and quality care, a physician has to understand the patient” and believes language barriers lead to compromised quality of care and preventable medical errors (Jordan, 2007, p. 1). Providers and patients share the same concern with language barriers during the delivery of healthcare. The California Academy of Family Physicians in a 2003 survey found, “over half of all providers knew of one or more occasions in which the delivery of healthcare was compromised by language barriers” (Jordan, 2007). A successful provider-patient relationship requires communication and the language barrier may have an influence on U.S. beneficiary’s satisfaction during their healthcare experience. A study by the University of California Center for Health Policy Research found that, “language barriers between patients and healthcare providers result in longer hospital stays, more medical errors and lower patient satisfaction” (NgoMetzger et al., 2007, p. 1). Jordan went further to state such barriers cause unnecessary tests, delayed diagnoses, and patients not properly following their prescribed treatment plans (Jordan, 2007). Access to English speaking staff is limited and is sometimes unavailable during evening hours. U.S. beneficiaries are concerned with whether or not provider-patient dialog is translated as intended. An active-duty (military) family member, Jamie Yenco, shared her experience as both “nerve-racking and scary...although we have interpreters, you don’t always get the full story” (Allen, 2007b, p. 2). Technical Sergeant Ortiz, stationed in Japan, stated, “there was limited interaction with the technician and that there was no play-by-play...or conversation beyond the initial greeting” (Allen, 2007b, p. 4).

Patient satisfaction is an outcome of quality care, not vice-verse. Data from National Committee for Quality Assurance (NCQA) shows that access is a critical variable of influence for patients’ satisfaction (White, 1999). Donabedian views satisfaction, “as a judgment on the

quality in all its aspects, but particularly as concerns the interpersonal process” while other experts, Ware, Synder, Wright and Davis, defined satisfaction as a set of components, “interpersonal skills, technical quality, accessibility, cost, efficacy, continuity, the physical environment, and availability of resources” (Westaway, Rheeder, Van Zyl & Seager, 2003, p. 338). Gerteis (Gerteis, Edgeman-Levitan, Daley, & Delbanco, 1993) believed that the delivery of healthcare should weigh heavily on the patient's experience of illness and the patient-provider relationship should be one of collaboration throughout the entire patient-provider encounter. Many U.S. beneficiaries and military referring providers are pleased with the host nation care and are eagerly willing to recommend such care to others. Many U.S. beneficiaries stated that their HNH staff was very attentive, polite, spoke excellent English and received top-notch care (Allen, 2007a). A provider in Japan, LCDR Ecker stated, “I feel very confident in referring patients...I have had five patients treated there...they have one of the top five endovascular surgeons in Japan” (Allen & Little, 2007).

Being able to receive care locally may positively influence a U.S. beneficiary's satisfaction. A DoD employee in Japan, Chip Steitz, stated, “rather than fly to the states with all the expenses, I had the procedure done here and was able to go home and recuperate with my wife and friends nearby...I probably only had to take off half as many days as I would have needed had I gone back to the States” (Allen & Little, 2007, p. 2). Whether or not HNH care is less expensive as compared with the U.S., a TRICARE Standard beneficiary will have the potentially large financial burden to pay the full bill at the time of discharge; this may influence a U.S. beneficiary's overall satisfaction with their experience. For example, a newspaper reporter died in a Japanese hospital. His wife, in order to allow her to take the body and properly bury it, had to take out a loan for \$20,000 to repay the hospital (Allen, 2007b).

Design and Potential Biases

The patient satisfaction survey was designed to provide a reliable and valid tool for leaders, providers, planners and payers to gain a better understanding of patients' healthcare experiences, current or potential issues and challenges. Most importantly, the intent of this data is to provide a continuous means to evaluate and trend patient satisfaction of those receiving care in a HNH facility; when required, make rapid, effective and efficient changes.

Utilizing a survey related to the Army Provider-Level Satisfaction Survey (APLSS) and with a similar U.S. beneficiary population helps to facilitate comparing data both internally (IHO) and with APLSS similar data. Prior to the APLSS full deployment covering over 4,000 providers, there were several pilot tests conducted (by the third-party program administrator Synovate) with a smaller number of providers geographically dispersed throughout the United States (Army Office of the Surgeon General, 2007). The APLSS was designed for continuous tracking through three methods of data collection (telephonic, mail and web-based). The APLSS database provides Internet-based, around-the-clock access and reporting capabilities, allowing for targeted and immediate responsive actions. This information is accessible to the public through the TRICARE Operations Center (TOC) link on Office of the Assistant Secretary of Defense for Health Affairs website (<http://www.ha.osd.mil/>). Making information available to the public has been shown to influence internal quality improvement efforts (Joshi, Nash & Ransom, 2005).

The Army Surgeon General on the Army Medical Department Command Management System, along with fiscal year 2008 Business Plan guidance, has directed a two percent increase in APLSS question 7 (scores of 4 and 5 combined), patient's overall satisfaction with provider, placing the satisfaction target at 95%, along with achieving high marks in several (satisfaction

related) HEDIS measures (Army Office of the Surgeon General, 2007; Army Medical Department CMS, 2008). HEDIS measures primarily focus on preventive measures (e.g., screening of cancers) and educating patients as to the type of care they should receive, this allows for increased dialog between the provider and patient (i.e., influential in patient satisfaction). The military health system continues to outsource the APLSS, as many healthcare organizations believe it is more efficient to outsource than to maintain appropriate staff to conduct surveys (Bell & Krivich, 2000). To include patient demographics in the survey provides indications about potential problem areas among specific groups or populations. Joshi (Joshi, Nash & Ransom, 2005) indicates that young, old and Medicaid eligible patients are more prone to not complete satisfaction surveys. It is also stated that the angriest patients are the least likely to complete a satisfaction survey. "It is not surprising that 90% or more of patients say they are satisfied, because the language of satisfaction is too restricted to convey the many nuances of attitude" (Baker, 1993, p. 58).

The MOU HNH survey is a point-of-service survey, meaning is it given to the patient near time of discharge, while the APLSS is primarily a mail-return survey. Point-of-service surveys provide rapid feedback (which allows the staff to address concerns right away), by design are relatively inexpensive to maintain, and provide customizable reports at any time. There are a few downsides to the point of survey method: is it a continuous system, patients may not feel completely lucid at the time of completion, patients may feel pressured, patients may feel that anonymity is missing, no means to control the process (you get the survey back when you get it), potential of over-sampling of group, and keeping the information private is always a concern (Bell & Krivich, 2000). Survey questions should address quality, access and interpersonal issues. It is critical to include an overall, "how satisfied were you with your provider" and "how

satisfied were you with the facility visit". This allows the researcher to assess overall performance and provides a single metric to do so. Satisfaction questions should have a scale to answer. White noted a statement from A.C. Myers III (CEO and President of the healthcare survey firm Myers Group), "the most generally used and accepted scale that you'll see quoted in the literature and utilized by the NCQA is the five-point scale... advocating a five-point scale ranging from poor to excellent. Myers, as well acknowledged that, in general, questionnaires are designed to ask just about every question possible, but typically forget to ask the essential question, "overall, how satisfied are you with your physician" (White, 1999, p. 3). Guadagnino (2003) is in agreement with the Myers, confirming that it is extremely common for surveys to use a five-point scale ranging from very poor to very good. Collecting patient demographics allows identifying trends within specific groups or populations. If a survey is perceived as anonymous, patients are more prone to respond truthfully to the questions. Mailing surveys, rather than staff handing them out, is recommended. Patients may be influenced by staff (increasing potential error/bias) when they are handed to them (e.g., pressured to rapidly complete them). Short surveys are also recommended as long surveys may lead to low motivation for patients to complete the surveys, resulting in a low response rate, a biased sample and potentially missing data (Tso, Ng & Chan, 2006). Low response rates may introduce a margin of error and a 35% response rate is typical for a mailed survey, however the more responses you get the more valid and reliable your results are likely to be (White, 1999). According to Dr. Glincr, APLSS Senior Survey Statistician, a 20% response rate is typical; however the APLSS strives for a 30% response rate to be representative of the population (Army Office of the Surgeon General, 2007). During statistical analysis it is recommended not to lump responses together, especially if there is a low response rate as it increases room for error (White,

1999). The APLSS practices this, combining scores of satisfied and completely satisfied together into a single category of satisfied (Army Office of the Surgeon General, 2007). This project will follow the same technique of the APLSS, combining scores (Q10 and Q11) of 4 and 5 to show satisfaction, in order to compare results uniformly. One of the main concerns providers continue to express is that many of the satisfaction results received are not timely, nor actionable (an inherent bias). Additionally, providers recommend questions be more objective. Instead of asking how satisfied were you with your provider, ask something more actionable, for example, in a way you could understand, did your provider explain what was being done and why. Surveys which are conducted in the same manner with standardized questions may produce more reliable and valid comparisons (Joshi, Nash & Ransom, 2005).

Potential Benefits for Having High-Satisfaction

There is a great deal of benefit to be gained from having accurate and timely patient satisfaction information, aside from providing leaders the ability to view current standings across their organization, providers, and clinics. Patient satisfaction results may provide an additional indicator for improvement competition and bragging rights. Patient satisfaction results have become a predictor of outcomes (e.g. patient compliance, regulatory compliance, market share, patient loyalty, population health status workload, revenue). Patient satisfaction feedback (data) provides valuable information that may improve the delivery of healthcare. Satisfaction data can identify areas of potential trouble; provide critical data to monitor a variety of medical delivery models and to make appropriate health care purchasing decisions. The NCQA requires patient satisfaction data for all managed care organizations applying for their accreditation (Kerr, Hays, Mitchinson, Lee & Siu, 1999). Managed care organizations are using this information not only as a measurement of performance tool, but as a determinant of cost (or discounting) of current

and future contracts, including pay-for-performance schedules. Satisfied patients initiate less litigation (Guadagnino, 2003; Wanless, 2007). Tso posited that an organization with timely and analyzed patient satisfaction data can improve care and services, leading to better patient health (Tso, Ng & Chan, 2006). Poor patient satisfaction can turn into litigation. In his article Guadagnino (Guadagnino, 2003), referred to a June 2002 study (by Hickson, Federspiel, Pichert, et al., 2002), in the *Journal of the American Medical Association* (volume 287, issue 22), which stated that lawsuits were considerably influenced by the number of patient complaints. "Past research on patient satisfaction has found a linkage between satisfaction and hospital utilization. While a majority of past findings supported a positive relationship, several studies presented evidence for an inverse relationship between satisfaction and frequency of outpatient visits" (Cho, Lee, Kim, Lee & Choi, 2004, p. 14).

An additional indicator of the quality of an industry is its level of success in the investment market and its financial viability. The healthcare sector, now and in recent years, has performed well on Wall Street. Bell (Bell & Krivich, 2000) found that the strong correlation between a hospital's quality score and its operating margin and that nearly 25 percent of the variation in profitability could be accounted for by the patients' perceptions of quality. Standard and Poor's is researching methods to include: patient satisfaction influenced, quality indicators into their bond ratings (White, 1999; Bell & Krivich, 2000).

Measuring satisfaction represents care, compassion and the drive to improve your staff and community. Keeping your customer satisfied increases loyalty to your organization. Retention is substantially cheaper (5x) than recruiting new patients (White, 1999). Patient satisfaction has been linked to employee satisfaction and retention, competitive market strength, profitability and risk management (e.g., decrease in litigation) (Wolosin, 2001). As the level satisfaction

increases among patients, so in turn does the patients' likelihood to comply with their medical regimens and provide critical data to their providers (Fitzpatrick & Hopkins, 1993, p. 4; Ferris L. E., 1992; Kerr, Hays, Mitchinson, Lee & Siu, 1999). Satisfaction data can aid in staff training, this may improve the provider-patient relationship as patients become more educated (e.g., understanding complication rates, report cards, clinical quality) providers can use this data to identify and maintain currency of patient concerns (Guadagnino, 2003). "It has been proposed that the effectiveness of health care is determined, to some degree, by satisfaction with the services provided...a satisfied patient is more likely to utilize health services, comply with medical treatment and continue with the health care provider" (Westaway, Rheeder, Van Zyl & Seager, 2003, p. 338). A patient satisfaction study by Tucker (1998) enforced the importance of patient satisfaction studies. Tucker discussed previous study findings and the importance they have on the military, for example, "that military readiness, patient compliance with prescribed regimens, and lower overall health care costs are all correlated with patient satisfaction". Tucker additionally stated that, "health care ranks within the five most important quality-of-life issues associated with morale, which is a short-term determinant of readiness" (Tucker, 1998, p. 758).

Healthcare has a unique challenge, unlike other industries they have to first take care of the patients' needs versus their desires. For this reason, there is a motivation (by all parties) for a close provider-patient relationship. Involving patients throughout their care, increases satisfaction and meets many of their desires. Patient satisfaction information can indicate in an organization, what works well (or does not), organizations can then allocate resources appropriately (perhaps increasing workload and decrease staffing issues) (Wanless, 2007).

The Department of Defense

For over 10 years, the Department of Defense has been surveying the satisfaction of the TRICARE program. A large amount of resources continues to be committed towards this DoD program. This program obtains critical satisfaction information from over 140 healthcare facilities worldwide; mailing out an estimated 7,000 surveys per day (United States Department of Defense, 1997). The DoD projects military health expenditures for fiscal year 2008 to be over 40 billion dollars (Winkenwerder, 2007). As such, the American people expect: “a fit, healthy and protected force, reduced deaths, injuries, and diseases during military operations, and superior follow-up care, seamless transition with the Veterans Administration, satisfied beneficiaries, creation of healthy communities, and effective management of healthcare costs” (Winkenwerder, 2007, p. 2). Healthcare leaders in the military are shown to use information from patient satisfaction surveys as a metric of provider and organizational performance. Having a patient satisfaction feedback tool, as the APLSS, allows for continuous alignment of the changing beneficiary demographics and needs of the military health system (Army Office of the Surgeon General, 2007). As beneficiary populations are becoming critically tied to funding (capitation and prospective payment system) for military treatment facilities, maintaining a satisfied customer population becomes all that more important. This information may additionally provide leverage in negotiations with network providers and third party payers. As TRICARE’s Pacific Regional Office (i.e., TRICARE is divided into regions throughout the world) is currently working on a Regional Managed Care contract, and metrics such as patient satisfaction are being incorporated. Gwen Brown, Deputy Assistant Secretary of Defense for Health Budgets and Program in a 1997 interview stated “we want to know how people view their experience...this survey lets customers know we really care about them. We want to know what

they think of the treatment they received, their provider, and the facility...we need this information to improve the system. We don't want to bombard our customers with requests for information, so we've purposely made this survey short and specific. We can benchmark satisfaction levels at military treatment facilities with those in civilian health maintenance organizations" (Gillert, 1997, p. 1). Although the military's workload and pace has been extremely demanding, with limited resources, satisfaction with TRICARE has consistently improved over the past decade. In addition to "adding performance-based and patient-centered care initiatives throughout the military health system, we added financial incentives to improve beneficiary satisfaction from our contract partners and ensured our contractors are financially rewarded for care delivered in the private sector" (Winkenwerder, 2007, p. 6). "Consumers are becoming more engaged in their own health care than in the past...demanding more information and choice from their providers, engaging in more self-care and self-management of disease, and showing more interest in participating in their healthcare decisions...the unique preferences, concerns and expectations a patient brings to a clinical encounter...must be integrated into clinical decisions to serve the patient" (Quadrennial Defense Review, 2006, p. 32).

Purpose of the Project

The purpose of this project (using a reliable and valid survey instrument) was to determine U.S. beneficiary satisfaction (needs, wants, desires; perceptions/expectations) of all IHO referred outpatient care received at HNH (Korean) and if overall satisfaction with provider meets the fiscal year 2007 Department of Defense/Military Health System's goal of 95% satisfied (with scores 4 and 5 combined). This project additionally looked at the relationship between U.S. beneficiary patient satisfaction and facility visit (if it too met a 95% satisfaction level), beneficiary category, command sponsorship and gender. Retaining or increasing the U.S.

beneficiary market share is not a primary concern in Korea, as the healthcare delivery system is designed around a closed network with limited resources. Patient satisfaction information provides leadership with a patient perspective of care received. This information is key in maintaining a healthcare system (i.e., in this unique setting-Korea) which provides access and quality to its beneficiary population. The survey's data provides an understanding of how satisfied or potentially, dissatisfied patients are. Leadership and providers can incorporate this information into future planning (changes), training and evaluations. This information has identified both the good and bad (successes and failures) within the current system. Timeliness of survey feedback to IHO and HNH leadership is critical, this may allow for rapid changes to be made with the system when necessary. Reacting to feedback in a timely manner displays to the beneficiary population that the leadership not only reviews and is concerned about beneficiary feedback, it reacts. This information provides a check/balance on what (and how many) services are referred out and to which facility. Results allow leadership to view and compare each Host Nation Facility separately. TRICARE Management Activity is developing a managed care contract to cover the Korean Peninsula, scheduled to begin in 2009. It is assumed that the managed care contract will initially build the network utilizing the current MOU HNH and will continue a modified version of the current agreements. Assessment tools, to include patient satisfaction surveys, will become a requirement for the managed care contract and contractor.

The dependent variables are: ($y_1/Q10$) everything considered, how satisfied were you with the facility during your visit; ($y_2/Q11$) overall, how satisfied do you feel about your visit with your provider; ($y_3/Q1$) your provider listened to you carefully about your concerns; ($y_4/Q6$) courtesy and helpfulness of the staff during this visit; and ($y_5/Q7$) the coordination among all the people who cared for you during this visit. The independent variables are (the demographics):

(x_1) gender; (x_2) beneficiary category; (x_3) command sponsorship. The following hypotheses will be tested:

1. Ha1: The patients' overall satisfaction during 'visit with their (HNH) provider' (Q11) meets FY07 DoD/MHS goal of 95% satisfied.
2. Ha2: The patients' overall satisfaction with (HNH) 'facility visit' (Q10) is at least 95% satisfied.

METHODS and PROCEDURES

This project identifies and addresses the MOU HNH referred US outpatient beneficiary population and their satisfaction levels with MOU HNHs. The means and methodology used to collect and analyze this data, including additional categorical and quantitative data, was derived primarily from the MOU HNH (outpatient) survey, local and military databases (including the IHO's TRICARE Office HNH database), the Military Health System's Management Analysis and Reporting Tool (M2), the Army Medical Department Command Management System, ICE, and the APLSS online reporting system. The MOU HNH survey additionally collects demographic data (e.g., gender, beneficiary category and command sponsorship) of U.S. beneficiaries in order to identify potential satisfaction indicators. The satisfaction information was compared (using inferential statistics) with data in the APLSS system to identify how satisfaction may vary among the MOU HNHs and the IHO. MOU HNH survey questions 10 and 11 were compared against the corresponding APLSS questions 21 and 7 providing IHO leadership an additional quality indicator tool for planning. Additionally, correlations on the MOU HNH questions were conducted (using raw data). This information provides additional insight to allow leadership, both at the IHO and HNH, to make appropriate reactionary and

proactive decisions relating to meeting the needs and expectations of their beneficiary populations.

Type of Analysis

The Statistical Package for Social Science (SPSS) version 16 for MAC, XLSTAT 2008 and Microsoft Excel Statistical Add-On for statistical (quantitative) analysis was utilized for this project. A descriptive summary of U.S. beneficiaries (in the ROK whom are IHO beneficiaries referred as an outpatient) satisfaction along with correlations solely to test the hypotheses was conducted. Descriptive statistics for the MOU HNH survey are seen Table 1 below. To test the hypotheses, Q10 and Q11 (the dependent variables) were individually totaled (combining Likert Scale answers of 4 and 5) with descriptive statistics (means and standard deviations) performed to determine the overall percentage satisfied for each question. Satisfaction is defined as a response of “somewhat satisfied or completely satisfied” on Questions 10 and 11 of MOU HNH Satisfaction Survey (5 point Likert scale). Collection, statistical analysis, and reporting of this data is now on an on-going basis and continually is aligned (and adjusted as required) with the needs of the organizational leadership. Inferential statistics (ANOVA, Chi-Square, Pearson’s Correlation) were completed to determine if statistical significance existed.

Table 1

Descriptive Statistics from MOU HNH Survey (September-November 2007 data)

	<i>n</i>	MIN	MAX	Mean	SD
Gender (males-53; females-61)	114	0	1	.47	.50
Command Sponsored (yes-95; no-19)	114	0	1	.83	.37
Q1. Your provider listened to you carefully about your concerns and questions	114	0	1	.90	.31
Q6. Courtesy and helpfulness of the staff during this visit	114	0	1	.85	.36
Q7. The coordination among all the people who cared for you during this visit	114	0	1	.86	.35
Q10. Everything considered, how satisfied were you with the facility during your visit	114	0	1	.92	.28
Q11. Overall, how satisfied do you feel about your visit with your provider	114	0	1	.93	.27

Note. Gender (1 = male; 0 = female); Command Sponsored (1 = yes; 0 = no); Q1, Q6, Q7, Q10 and Q11 (1 = satisfied with scores 4 and 5 combined from Likert scale; 0 = all other scores).

Validity and Reliability

The MOU HNH survey was designed and aligned in accordance with the Army Provider Level Satisfaction Survey in order to increase validity and reliability. APLSS mails out an average of 7,000 surveys per day with an average response rate of 39% (Army Office of the Surgeon General, 2007). The MOU HNH survey questions being derived from the extensively tested and utilized Army Office of the Surgeons' General APLSS increases the validity and reliability along with the capability to compare data (within the APLSS system). As White (1999) stated, the more responses you get the more valid and reliable your results are likely to be; this adds to the reliability and validity of the APLSS by its large number of responses. The MOU HNH survey questions are aligned with the APLSS questions (for increased reliability and validity) and surveys the same U.S. beneficiary population. Utilizing a standardized patient satisfaction monitoring and reporting tool may allow healthcare leadership; opportunities to compare among similar facilities, more effective quality indicators, avoid and remedy potential

healthcare delivery obstacles and risks, and if required, to react accordingly and in a timely manner. Standardize tools are critical, just as Davies acknowledged following the implementation of the NCQA member health survey, “for plans, payers, and the public, this long awaited standardization provides opportunities for benchmarking, comparison and better-informed decision-making” (Davies, Ware & Kosinski, 1995). Synovate, the company contracted to design the APLSS, provided an information paper regarding the development and validity (to include validity evaluation indicators used) of the survey (see Appendix G). Synovate, one the largest custom research firms in the world, is DoD Information Technology Security Certification and Accreditation Process compliant and National Committee on Quality Assurance certified (Health Net, 2006). Synovate conducted several analyses throughout each stage in the APLSS lifecycle development and implementation. Synovate, in addition, leveraged results from existing healthcare surveys (e.g., CAHPS, Kaiser Permanente questionnaires), and Army Medical Department staff input regarding the survey questions soundness (Synovate Healthcare, 2007).

Along with the descriptive statistics table, this project includes frequency distributions for all variables measured. This project assessed the internal validity (it appropriately addressed the intended hypothesis- $y = f(x)$), the external validity (the results can be applied to related populations and groups) and face validity (the data appeared valid and did measure what it was designed for). During the hypothesis testing, inferential statistics (e.g., ANOVA, Chi-Square, and Pearson’s correlation) were conducted via SPSS and XLSTAT on the dependent variables: ($y_1/Q10$) everything considered, how satisfied were you with the facility during your visit; ($y_2/Q11$) overall, how satisfied do you feel about your visit with your provider and independent variables: (x_1) gender; (x_2) beneficiary category; (x_3) command sponsorship. To ensure the

survey remained straightforward and questions meant the same to all potential readers of the survey, I additionally conducted a Flesch-Kincaid index for reading ease (i.e., length of sentences and number of syllables per word), which was 57.4 and grade level of 8.6.

Ethical Considerations

The Tripler Army Medical Center (TAMC) partners with the 18th Medical Command as their Institutional Review Board (IRB) (Leighnor & Person, 2007) of record. The TAMC IRB was contacted and was provided an overview of this project along with a sample of the survey. The project and survey were not subject to review-and-approval by the TAMC IRB (see Appendix I) as this project was determined to place emphasis on internal purposes and improvement (Leighnor & Person, 2007). "Military treatment facilities may conduct local level surveys of beneficiaries and assigned personnel to address the need for more specific information on clinic operations and services within that specific military treatment facility...it should primarily be administered on site and the results published and utilized at the local level. Surveys of this nature will not require Health Affair or TRICARE Management Activity level review and approval" (Sears, 2000, p. 2). This survey protects the anonymity of its participants as the survey does not include a means to determine who completed the survey nor can it determine specific patient data.

Project Design

This project uses inferential statistics to identify and determine if any quantitative differences exist between them with overall satisfaction with the provider and facility, after an outpatient visits a HNH within the Republic of Korea using sample size, means and standard deviations (see Table 2 for coding). As the literature review indicated, one of the largest influencers to patient satisfaction is the provider-patient interaction. The IHO continues to pursue methods to

increase its communications and coordination's among patients, staff and agencies. For these reasons, this project focused primarily on the three demographic fields (gender, beneficiary category, command sponsorship), Q10 and Q11 of the MOU HNH survey and potential correlations amongst survey questions themselves. All data was derived from the TRICARE U.S. beneficiary referred to a MOU HNH as an outpatient population. A beneficiary is considered an outpatient when he or she returns home the same day as the medical treatment facility visit and or procedure.

Data Collection

Survey data collection and analysis, for this project, utilized available data from September through November (three month period) 2007. The period represents a period after large personnel transitions and prior to the holiday (exodus) period. The data was entered into the database for statistical analysis as it was received by the IHO's TRICARE Office. This continuous collection and analysis (see Figure 3) ensures leaders have an ongoing picture (not a semi-annual or annual picture) enabling them to react rapidly and intervene when it is needed; data becomes history rapidly. According to the IHO's TRICARE Service Center's local database and as seen in Appendix A, 12 of the 24 MOU HNHs are in the heavily U.S. beneficiary populated Seoul area. According to the TRICARE Service Center's database, there was an estimated 6,000 total referrals in calendar year 2007 throughout the Korean Peninsula for US beneficiaries. In order to establish an equally distributed sample within the ROK, three hospitals geographically separated throughout the ROK were chosen. These three hospitals, Samsung, Dankook and Dongsan represent nearly half of all calendar year 2007 U.S. beneficiary outpatient referrals within the ROK. For this reason and having the ability to control (via the

TRICARE Service Center staff) the survey distribution and collection, this project used these three hospitals as its U.S. beneficiary outpatient sample (n) of the ROK population (N).

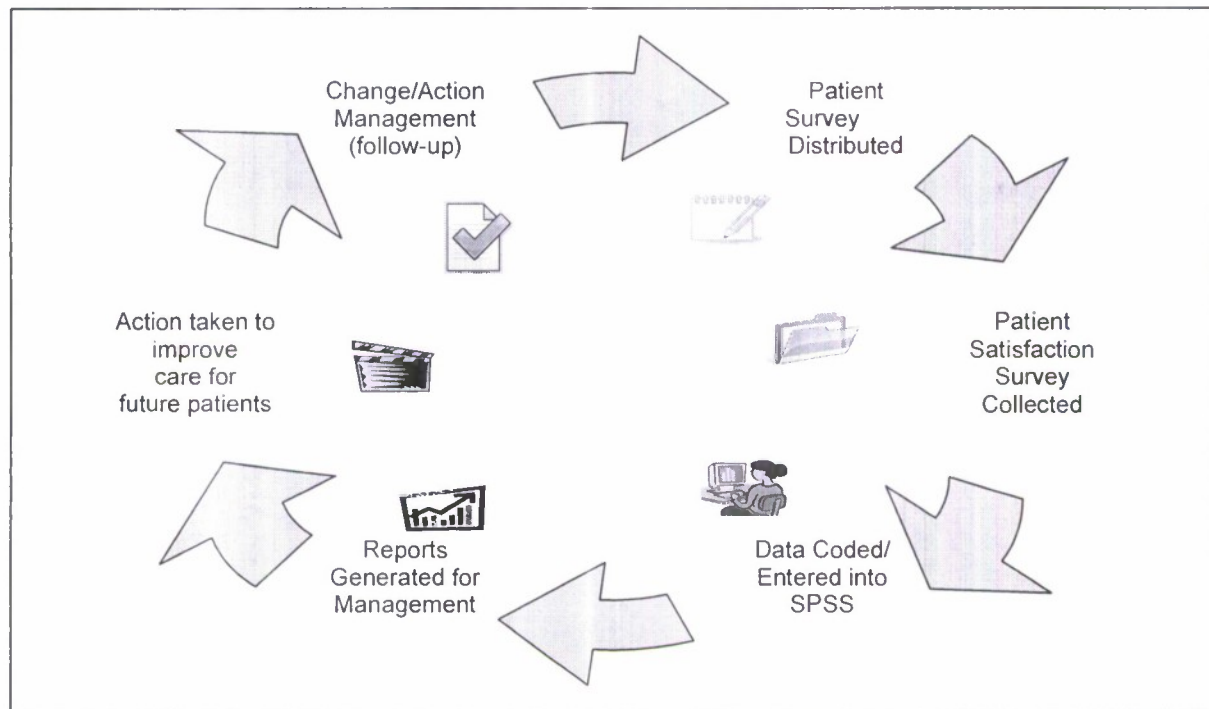


Figure 3. Conceptual model of IHO survey data collection and analysis.

Survey Instrument

Although the APLSS primarily utilizes the mail survey method (with an Internet response option), the MOU HNH survey uses a point- of-service survey due to resource constraints. As of 20 December 2007, the MOU HNH survey has a link to an Internet response option through the ICE system. To minimize variation from the intended APLSS data, each item was scored on a five-point (five possible responses) Likert scale (similar to the APLSS) ranging from one (completely dissatisfied) to five (completely satisfied). In a patient satisfaction questionnaire study by Mangelsdorff, the use of the “Likert scale format allowed for greater discrimination of the intensity of a respondent’s belief regarding an issue...was a consistently more reliable method to produce scores than using other methods (e.g., Thurstone method)” (Mangelsdorff,

1979, p. 86). Survey scores of 4 and 5 (somewhat satisfied or completely satisfied) were combined to determine the percentage of overall satisfaction for patients' responses to Q10 and Q11 on the MOU HNH Survey. The MOU HNH survey, as seen in Appendix C, uses a Likert Scale (1-5) for the following (APLSS matching) questions:

- Q1. Your provider listened to you carefully about your concerns and questions.
- Q2. Your provider understood your problem or condition.
- Q3. Your provider treated you with courtesy and respect.
- Q4. Your provider explained what was being done and why.
- Q5. The amount of time you waited at the facility to see the healthcare provider.
- Q6. Courtesy and helpfulness of the staff during this visit.
- Q7. The coordination among all the people who cared for you during this visit.
- Q8. The cleanliness of the facility you visited.
- Q9. The comfort of the facility you visited.
- Q10. Everything considered, how satisfied were you with the facility during your visit?
- Q11. Overall, how satisfied do you feel about your visit with your provider?

Surveying Process

For those U.S. beneficiaries utilizing the MOU-HNH free shuttle system, the MOU HNH survey was distributed by IHO staff upon beneficiary check-in at the TRICARE Service Center. All other U.S. beneficiaries throughout the ROK that do not process through the TRICARE Service Center are provided the MOU HNH survey at the point-of-service by International Health Clinic staff at the MOU HNH. The survey was either collected upon return to the TRICARE Service Center by the TRICARE staff or the survey, which is pre-printed and stamped, was mailed in (at no cost) directly to the TRICARE Service Center. All patients had an

equal opportunity to respond (and to do so anonymously). Due to the geographic dispersion of medical facilities, communications between the facilities, drivers, and patients continues to prove a rather large obstacle in controlling the distribution and collection of surveys outside of the Seoul-Yongsan area, where the TRICARE Service Center is located. For this reason, it is assumed that a portion of the 511 U.S beneficiary outpatients referred (during this timeframe) to a HNH have not received the opportunity to provide feedback via the MOU HNH survey (a project limitation). The ICE online survey option (with questions aligned with the hardcopy MOU HNH Survey), which was introduced in December of 2007, which is now monitored closely by the TRICARE Service Center and the Patient Advocate to determine its effectiveness for the beneficiaries and the organizational leadership (e.g., response rates and reporting formats). Additional process improvement options are under discussion with the TRICARE Service Center leadership (e.g., incorporate into patient transportation briefings, placing a TRICARE representative in each of the four geographic areas, and training at the MOU facilities).

Survey Return Rate

The response rate was calculated by dividing the number of returned surveys (114) by the number of U.S. outpatient beneficiaries referred (511) to MOU facilities. A limitation to this project, as seen later in the Discussion section of this project, refers to the inability of the TRICARE Service Center to ensure 100% of referred outpatients received a survey to complete. The goal for this project was a response rate of 25%, however only a 21% response rate (or approximately 38 per month) was achieved during the timeframe. This project does not compare data and/or results with historical data and time periods due to the limited amount of historical data.

Data Coding

The software package, Statistical Package for Social Sciences (SPSS) 16, XLSTAT 2008 and Microsoft Excel Statistical Add-On, which were utilized in this project, required data (variables) to be coded for proper statistical analysis. Table 2 describes the coding utilized for SPSS in this project.

Table 2

Data Coding for Statistical Package for Social Sciences (SPSS)

Variable	Description	SPSS Code	Data Source
Dependent Variables			
	Patient-Provider Satisfaction (scores of 4 and 5 are combined)		
	Patient-Facility Visit Satisfaction (scores of 4 and 5 are combined)		
Independent Variables			
Gender	Male	1	HNH Survey
	Female	0	HNH Survey
BENCAT	AD	1	HNH Survey
	ADFM	2	HNH Survey
	RET	3	HNH Survey
	RETFM	4	HNH Survey
	Other	5	HNH Survey
	Command Sponsored		
	Yes	1	HNH Survey
	No	0	HNH Survey

Note. The beneficiary category "Other" includes: Department of State and Embassy personnel, Korean service employees and Department of Defense School System teachers.

RESULTS

A sample of (n=114) US beneficiary outpatients referred to one of three MOU HNH in the ROK were surveyed to determine whether or not overall satisfaction with provider and visit reached the DoD/MHS 95% target. During the months of September, October and November of 2007 from Dankook Medical Center, Dongsan University Medical Center and Samsung Medical Center, the IHO (peninsula-wide) received 114 surveys (approximately 11% of all ROK referrals). This project resulted in a 21% response rate over the period, 4% less than originally

anticipated. The MOU HNH survey results did not support either alternate hypothesis. Overall satisfaction with provider and facility visit did not reach the DoD/MHS target of 95%.

Descriptive statistics revealed (see Table 1) the following overall satisfaction rates: Q1- 90%, Q6- 85%, Q7- 86%, Q10 (Ha1)- 92%, and Q11 (Ha2)- 93%. Scores of four and five are grouped together for overall satisfaction percentages. Frequency distribution tables for all variables can be seen in Appendix H. As seen in Table 3 and Figure 4 below, the mean patient satisfaction for the MOU HNH was higher than the 121st Combat Support Hospital for both Q10 and Q11, however only higher on Q10 when compared to the Medical Activity in Japan, Camp Zama (the only other Army Medical Activity in the region). Chi-Square results indicated no significance for Q10 ($\chi^2 = 2.01$; $p = .37$; $df = 2$), however did indicate a statistically significant result for Q11 ($\chi^2 = 13.3$; $p = .001$; $df = 2$).

Table 3

Satisfaction Percentages.

Organization	Overall Facility Visit Satisfaction (Q10)	Overall Provider Satisfaction (Q11)
MOU Host Nation Hospitals	92 %	93 %
121 st Combat Support Hospital	85 %	88 %
Camp Zama Medical Activity	90 %	95 %

Note. Data collection period for MOU Host Nation Hospitals 1 September through 31 November 2007. Due to pre-defined timeframes on the Army Provider-Level Satisfaction Survey (APLSS) online reporting tool, data collection period for 121st Combat Support Hospital and Camp Zama Medical Activity 27 August through 16 December 2007.

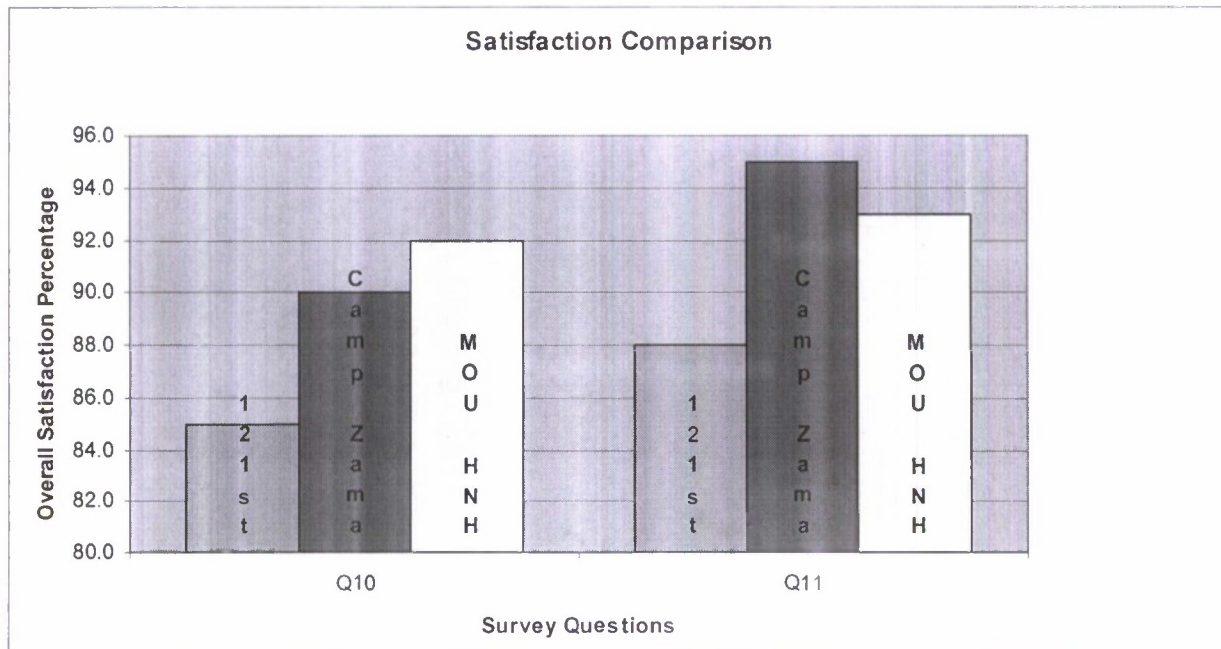


Figure 4. Overall Visit (Q10) Satisfaction (Likert scale scores of 4 and 5 combined); Overall Provider (Q11) Satisfaction (Likert scale scores of 4 and 5 combined) (Army Office of the Surgeon General, 2007; HNH Survey Results, 2007). Note. 121st and Camp Zama Medical Activity timeframes are from August 27 through 16 December; MOU HNH includes September through November 2007.

Descriptive statistics additionally revealed patient satisfaction means for gender, beneficiary category and command sponsorship in relationship to each survey question. Table 4 and Figures 5, 6 and 7, provide graphical representation of this data. Males had a 10% higher level of overall satisfaction when compared to females for all survey questions analyzed (mean of means); command sponsorship results indicated a small mean difference of 2 %; active duty and active duty family members (represented just over 92 % of all respondents) resulted in a 2 % mean difference, higher in active duty; retiree and retiree family members represented 4 % of all respondents with data indicating 100 % satisfaction; other beneficiaries (Department of State and

Embassy personnel, Korean service employees and Department of Defense School System teachers) represented 4 % of all respondents and data showed an overall satisfaction of 84 %.

Table 5

Demographic Data Compared to HNH Survey Questions (September-November 2007)

Survey Question	Male	Female	AD	ADFM	RET	RETFM	Other	CMD Sponsored	Not CMD Sponsored	Overall Satisfied
Q1	94.3	85.2	88.4	91.7	100	100	80	88.4	94.7	89.5
Q6	94.3	77.0	88.4	80.6	100	100	60	85.3	84.2	85.1
Q7	94.3	78.7	87.0	83.3	100	100	80	86.3	84.2	86.0
Q10	94.0	90.2	91.0	92.0	100	100	100	93.0	89.0	92.1
Q11	94.0	88.5	87.0	97.0	100	100	100	89.0	100	92.9

Note. Satisfaction data based on Likert scale scores of 4 and 5 combined (HNH Survey Results, 2007) and displayed in percentages.

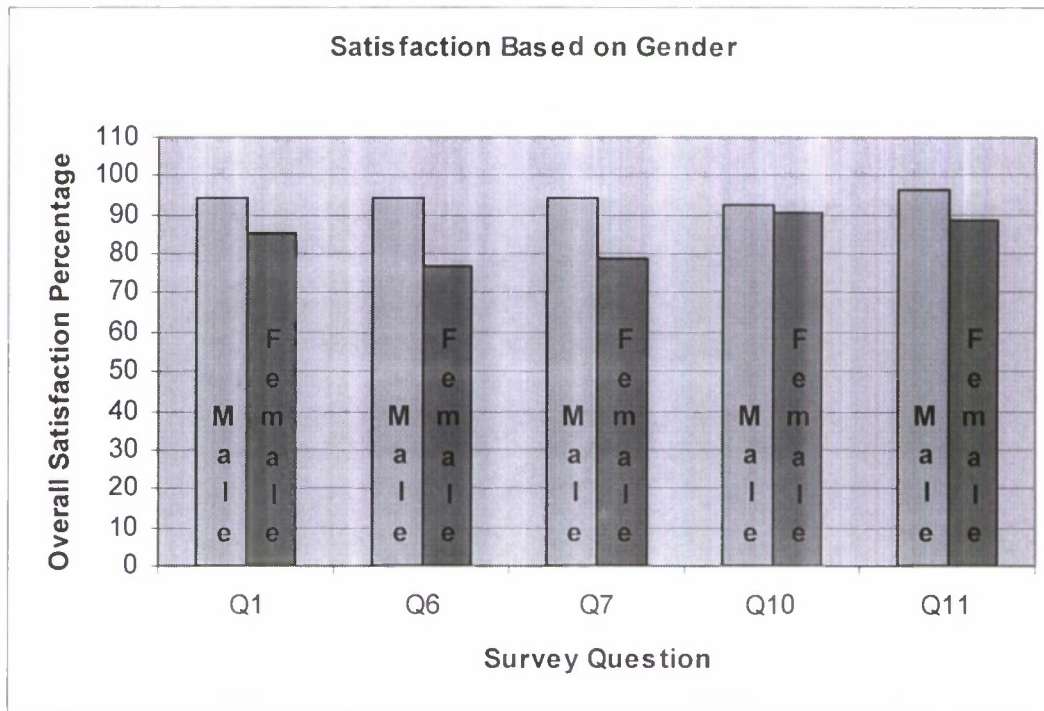


Figure 5. Overall Satisfaction based on Gender with Likert scale scores of 4 and 5 combined (HNH Survey Results, 2007). *Note.* MOU HNH includes data from September through November 2007; n = 53 males and 61 females.

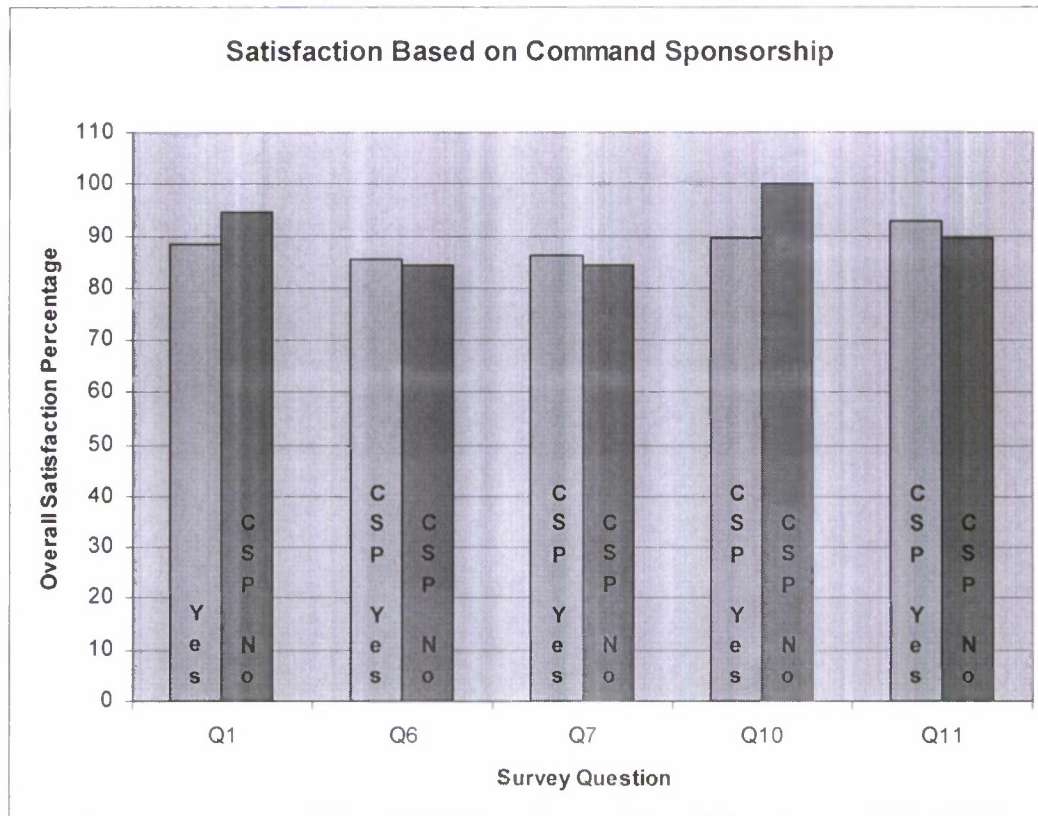


Figure 6. Overall Satisfaction based on Command Sponsorship with Likert scale scores of 4 and 5 combined (HNH Survey Results, 2007). *Note.* MOU HNH includes data from September through November 2007; n = 95 command sponsored and 19 not command sponsored.

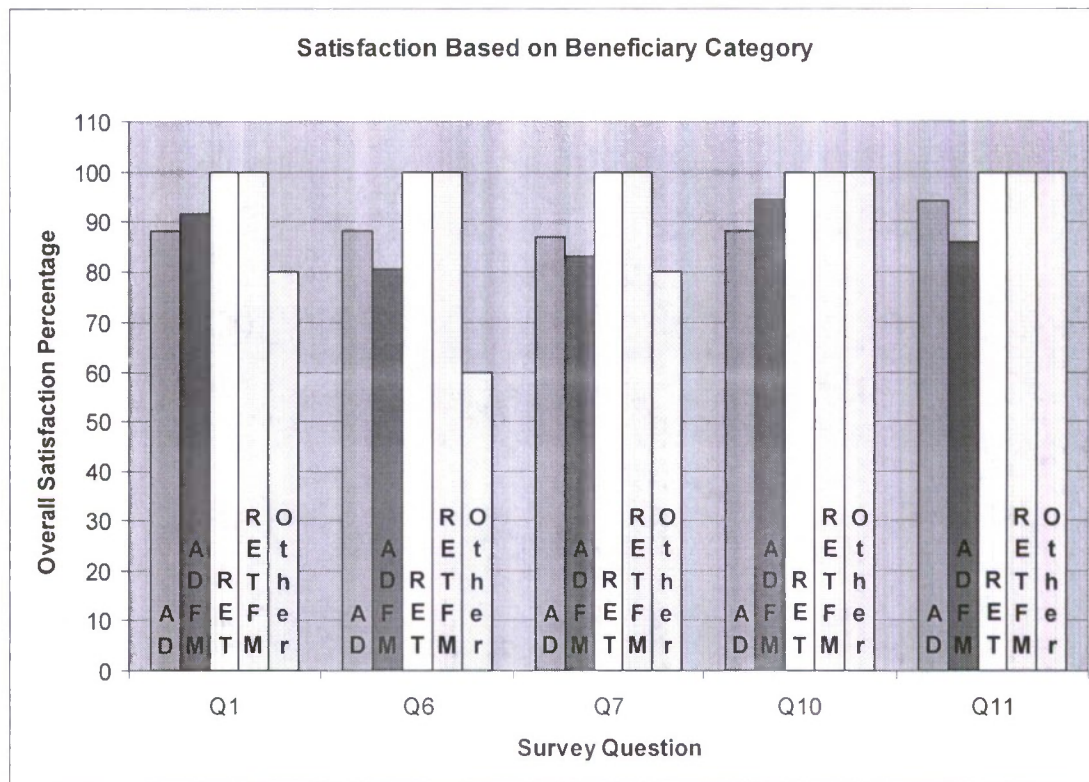


Figure 7. Overall Satisfaction based on Beneficiary Category with Likert scale scores of 4 and 5 combined (HNH Survey Results, 2007). *Note.* MOU HNH includes data from September through November 2007; n = 69 Active Duty, 36 Active Duty Family Members, 2 Retirees, 2 Retiree Family Members and 5 Others (Department of State and Embassy personnel, Korean service employees and Department of Defense School System teachers).

The following inferential statistical tests were completed: ANOVA (beneficiary category) and Chi-Square (gender and command sponsorship) to determine if statistical significance existed. The ANOVA conducted with Q10 and beneficiary category resulted in: $F(4,109) = .728$ with a p-value of .574, indicating no significance. When the ANOVA was conducted with Q11, there were similar results: $F(4, 109) = .491$ with p-value of .742. Chi-Square results, also indicating no significance, were as follows: Q10/Gender ($\chi^2 = .68$; $p = .5$; $df = 1$); Q11/Gender ($\chi^2 = 1.19$; $p = .5$; $df = 1$); Q10/Command Sponsorship ($\chi^2 = .22$; $p = .75$; $df = 1$); Q11/Command Sponsorship ($\chi^2 = 2.19$; $p = .25$; $df = 1$).

Correlations, between patient satisfaction survey responses were conducted and analyzed for significance using raw response data as seen in Table 5. These correlation coefficients were additionally squared (R^2) to determine the shared variance in the data that can be accounted for and the closeness of the relationships between the responses ("1" being a perfect relationship). Table 5 displays several significant correlations: Q1 and Q6 with an R^2 of .159; Q1 and Q7 with an R^2 of .249; Q1 and Q10 with an R^2 of .399; Q1 and Q11 with an R^2 of .384; Q6 and Q7 with an R^2 of .710; Q6 and Q10 with an R^2 of .403; Q6 and Q11 with an R^2 of .348; Q7 and Q10 with an R^2 of .515; Q7 and Q11 with an R^2 of .500; Q10 and Q11 with an R^2 of .678.

Table 6

Correlations Between Survey Responses.

		Q1	Q6	Q7	Q10	Q11
Q1	Pearson Correlation	1				
Q6	Pearson Correlation	.398**	1			
Q7	Pearson Correlation	.499**	.843**	1		
Q10	Pearson Correlation	.632**	.635**	.717**	1	
Q11	Pearson Correlation	.619**	.590**	.707**	.823**	1

Note. Raw data was used for these correlations; scores of 4 and 5 were not combined.

** Correlation is significant at the 0.05 alpha level ($p < .0001$).

DISCUSSION

The purpose of this project was to determine whether or not US beneficiaries are satisfied (in relation to the DoD/MHS 95% target) with the care that was received outside the military treatment facility. Although this project showed satisfaction percentages below 95% (Q10 and Q11), the project demonstrated that MOU HNH satisfaction levels of U.S. beneficiaries when compared to the 121st Combat Support Hospital were slightly higher, with Q11 statistically significant ($\chi^2 = 13.3$; $p = .001$; $df = 2$). The United States Department of Defense's Military Health System continues to be placed under increased public scrutiny and pressure to provide the Nation's sons and daughters (along with their families) accessible and quality healthcare. Although cost is a consideration within the Military Health System, the delivery of always accessible and quality healthcare trumps cost. For this reason, along with many regulatory and accreditation guidelines, monitoring and ensuring beneficiaries are satisfied with their healthcare has become an indicator which is closely tracked and reported at all levels within the United

States Government. Military members and their families will continue to be stationed throughout the world, and in many cases, in a location with limited healthcare options requiring host nation medical support. As TRICARE expands with future managed care contracts, close attention will be made to develop matrixes within those contracts to monitor beneficiary satisfaction (regardless of where care is delivered or received). The purpose of this project was not to determine why or how many beneficiaries received care outside the military treatment facility, although this is an area of concern. Some level of care will always be received by US beneficiaries outside the military treatment facility especially in the overseas environments due to resource constraints and military operational tempo. The standard of care (access) promised to each beneficiary has remained unchanged and appointments within the military treatment facility continue to be difficult to obtain, as such, referrals to MOU HNH will continue to increase.

Limitations of this project include a low response rate of 21% and sample size (goal 25% or greater). Although the potential impact to this project is considered extremely low, surveys returned did not indicate whether or not beneficiary was an inpatient or outpatient (only outpatients requiring transportation were physically provided the survey via the TRICARE Service Center in the Seoul area, surveys were available for pick up at both the TRICARE Service Center and the MOU HNHs by anyone). There exists no established method to confirm that every referred outpatient received a survey outside the Seoul TRICARE Service Center area (some patients drove themselves and may not have picked up a survey at the MOU HNH or TRICARE Service Center); the TRICARE Service Center database's reliability is questionable in determining the number of referred outpatients (the system was designed to track supplemental care only and fields are not clearly defined); Retirees, Retiree Family Members and

Others (Department of State and Embassy personnel, Korean service employees and Department of Defense School System teachers) are able to seek care directly at MOU HNH without going through the TRICARE Service Center and may not pick up (or turn in) a survey; and the beneficiary category "Other" with an 84% overall satisfaction includes all ages with various backgrounds making it extremely difficult to narrow down potential trends. It was assumed that each beneficiary that received a HNH Survey was properly briefed (without bias) and understood the process to complete and turn-in the survey. It is assumed that SPSS and XLSTAT produced objective and replicable results.

Although it was believed the non-command sponsored beneficiaries (which are required to pay for healthcare services upfront and out of pocket) would have a much lower satisfaction level when compared to command sponsored beneficiaries, the results did not support the assumption. Command sponsorship and the beneficiary categories of Active Duty and Active Duty Family Member represented a mere 2% mean difference in overall satisfaction. Korea (Asia in general) has a male-dominated culture, with more respect and attention given to the male gender. Results supported that gender for the U.S. beneficiary population does influence overall satisfaction; male satisfaction 10% higher mean than females (all five questions/composite average). As in the HNHs, the Korean provider-U.S. beneficiary relationship was expected to have a negative influence on patient satisfaction amongst female patients. This may be due to the HNH language challenges and levels of acceptance (and comfort zones) between genders. Healthcare leaders should focus attention on why males have a higher level of overall patient satisfaction than females. The IHO should build a focus group or root cause analysis team composed of beneficiaries and a multi-disciplinary hospital team with HNH staff to examine further. Although a gender distribution of providers and staff was not

conducted within this project, it may be determined that gender or cultural sensitivity training may prove useful for the beneficiaries, the IHO staff or the HNH staff. Another, less resource intensive option, may be to develop a statistical process control chart with the MOU HNH survey data to determine if there are any special causes for variation. As seen in the statistically significant correlations in Table 5, this project supports findings that when a provider listens, the staff is helpful and continuity of care/coordination is smooth satisfaction scores are impacted. Additionally, this project has reinforced the need to maintain constant communication (transfer of information) between facilities, providers and patients, particularly. In the overseas (multi-culture) environment, especially for the US beneficiary, it will be mutually beneficial to strengthen the relationships for sharing resources and information between the IHO and host nation facilities related to patient satisfaction.

Patient satisfaction information is and will continue to be an important source of information for health professionals, insurers, and consumers (Aday, 1996). Healthcare delivery is becoming more and more dependent on patient satisfaction data (this includes their perceptions and expectations) and has become a strong variable in future organizational strategic planning. Using this information may assist leaders and planners in deciding how and where to better allocate resources. This information may help civilian providers to determine whether or not they would like to become part of the TRICARE network (providing the opportunity was presented). The value of patient satisfaction studies may not only prove beneficial to military healthcare administrators, military providers and network (civilian) providers, but will perhaps aid in the consideration of future managed care contracts and provider network development.

For all healthcare institutions, patients are an invaluable source of information that cannot be ignored, no matter where they receive care or service. A means to collect, analyze and report

this information to healthcare leadership for appropriate action and planning is even more critical when health care delivery is received in a foreign environment. A reliable and valid tool to view U.S. (outpatient) beneficiary satisfaction within the ROK medical facilities provides an additional planning (decision making and problem solving) resource for Department of Defense Military Health System and host nation leadership. As mentioned previously, the accurate and timely measurement and analysis of patient satisfaction can be an indicator of quality, ultimately enhancing the care of patients, which is the core purpose of healthcare.

CONCLUSIONS

Although this project showed US outpatient beneficiaries seen at an MOU HNH have a higher mean satisfaction with their provider and facility visited when compared to the 121st Combat Support Hospital and Camp Zama Medical Activity, there remains room for improvement (especially in meeting the DoD/MHS target of 95% overall satisfaction with provider). As the command sponsorship continues to increase (current FY08 USFK policy adds 3,000 slots) in the ROK, the number of family beneficiaries will continue to grow. This population represents a greater acuity and higher healthcare utilization requirement than the active duty population. The IHO's primary mission is healthcare to its active duty population; this may increase the probability of higher utilization of referrals to MOU/HNHs. As more and more resources are channeled to support Operations Enduring Freedom and Iraqi Freedom, TRICARE access to care standards are increasingly scrutinized by the public; (can the military health system continue to take care of the Nation's sons and daughters properly). Patient satisfaction targets set by DoD/MHS will continue to evolve with the eventual tying-in of financial incentives for the organizations that meet established goals.

RECOMMENDATIONS

As a result of this project the following recommendations were made and implemented to increase response rates: modify survey distribution and collection by providing the HNH facilities with copies of the survey to hand out, provide drivers at all locations copies, build into the TRICARE Service Center's standing operating procedures a short brief to patients (along with a blank survey) prior to transport to HNH, offer a web-based survey option and have the local IHO TRICARE Marketing Officer advertise and offer incentives to complete the surveys (e.g., token gifts) on an on-going basis. Additionally, a recommendation was made to coordinate with Camp Zama, Japan TRICARE Service Center to review and potentially adopt best practices.

Future studies and research should include methodologies to: dissect the beneficiary category "Other" and educate both the US beneficiary population and MOU HNH provider on cultural differences (with special focus on gender expectations). The project did not assess the gender of the providers, recommend including this in future research. Recommend tracking the data for a longer period to increase the sample size and potentially, the response rate (to include utilizing the data from the ICE on-line responses). Recommend the Military Health System broaden the current outpatient satisfaction survey to include non-institutional medical treatment facilities. It is critical to continue outsourcing (similar to APLSS and the Service Delivery Assessment) the requirement for data collection and analysis; this provides the survey and statistical expertise, in turn a potentially more reliable and valid survey. Currently, data for the APLSS is pulled on a regular basis for each military medical treatment facility where it is later consolidated and forwarded to a contractor for statistical analysis and reporting. Currently, the Military Health System does not house non-institutional encounters and visits in the APLSS; however a database

could be developed to pull data from military health systems world-wide, after the specific variables and fields are identified. Developing a more specific means to measure satisfaction with actual healthcare outcomes may be one option for improvement. This could be as simple as adopting the US Air Forces' Service Delivery Assessment (SDA) tool. This SDA incorporates call centers throughout the US who call patients within 24 hours of their visit with specific questions focused on outcomes, which can be modified at various levels for benchmarking, measurements and trending. Results of the SDA are posted immediately online. Finally, recommend the IHO increase marketing efforts of the current surveys, along with potential incentives (e.g., TRICARE key-chain) for timely participation.

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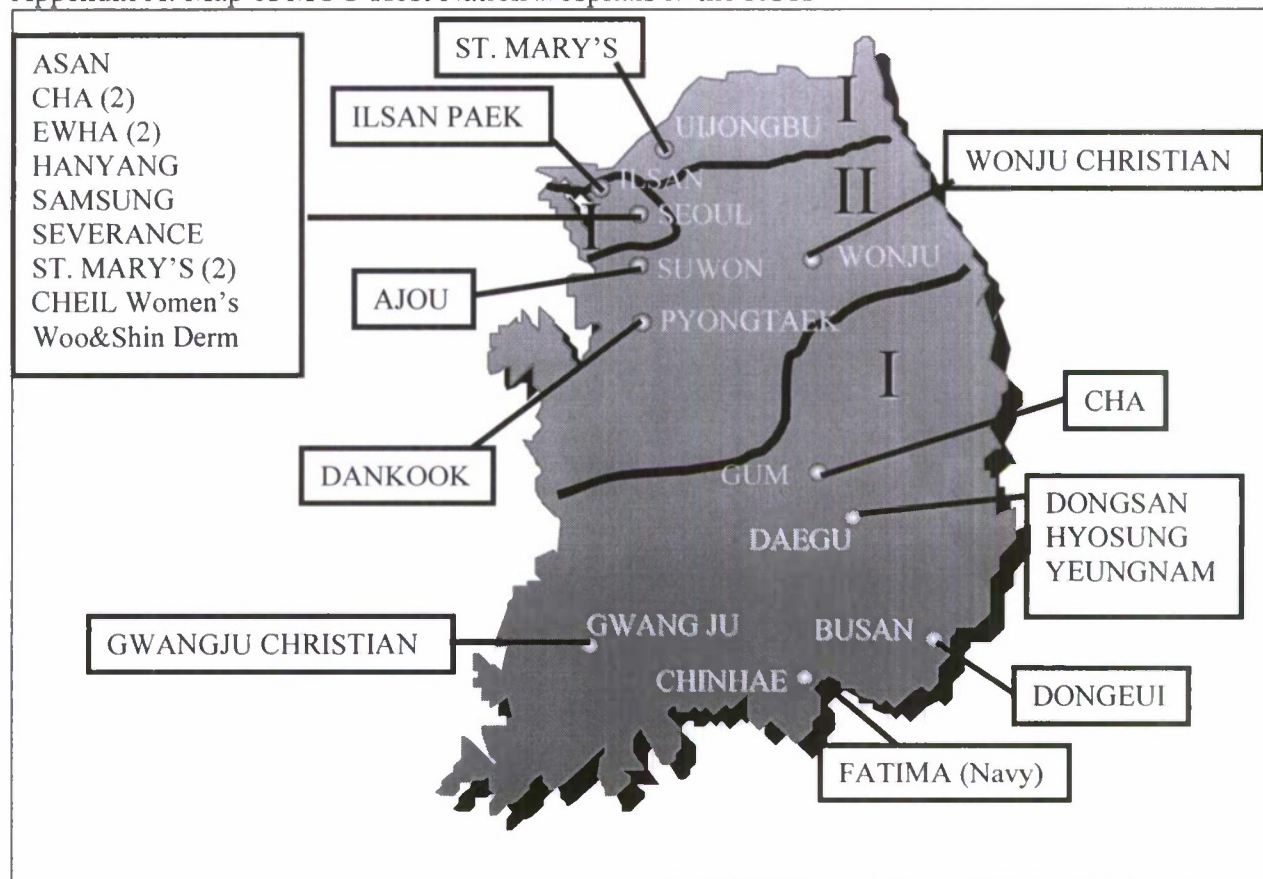
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Appendix A: Map of MOU Host Nation Hospitals in the ROK



Source: 18th MEDCOM command brief (Jolissaint, 2007).

Appendix B: Healthcare Comparisons between South Korea and United States

Indicator	South Korea Value (year)	United States Value (year)	Source
Physicians (number)	75,045 (2003)	730,801 (2000)	1
Physicians (density per 1 000 population)	1.57 (2003)	2.56 (2000)	1
Nurses (number)	83,333 (2003)	2,669,603 (2000)	1
Nurses (density per 1 000 population)	1.75 (2003)	9.37 (2000)	1
Midwives (number)	8,728 (2000)	463,663 (2000)	1
Midwives (density per 1 000 population)	0.19 (2000)	1.63 (2000)	1
Dentists (number)	16,033 (2003)	249,642 (2000)	1
Dentists (density per 1 000 population)	0.34 (2003)	0.88 (2000)	1
Total expenditure on health as percentage of gross domestic product	5.5 (2004)	15.4 (2004)	1
General government expenditure on health as percentage of total expenditure on health	52.6 (2004)	44.7 (2004)	1
Private expenditure on health as percentage of total expenditure on health	47.4 (2004)	55.3 (2004)	1
General government expenditure on health as percentage of total government expenditure	10.3 (2004)	18.9 (2004)	1
Social security expenditure on health as percentage of general government expenditure on health	79.2 (2004)	28.0 (2004)	1
Out-of-pocket expenditure as percentage of private expenditure on health	80.40 (2004)	23.80 (2004)	1
Private prepaid plans as percentage of private expenditure on health	7.1 (2004)	66.4 (2004)	1
Per capita total expenditure on health at average exchange rate (US\$)	776.9 (2004)	6096.2 (2004)	1
Per capita government expenditure on health at average exchange rate (US\$)	408.5 (2004)	2724.7 (2004)	1
Hospital beds (per 10 000 population)	66.0 (2002)	33.0 (2003)	1
Population	49044790 (2007)	301,139,947 (2007)	2
Gross national income per capita (PPP international \$)	21850 (2005)	41950 (2005)	1
Density (pop/sq.km)	487	31	3

Source: 1- World Health Organization, 2006; 2- South Korea, 2007; 3- 2007 World population data sheet, 2007.

Host Nation Medical Treatment Facility
Patient Satisfaction Survey

We need your help. We are trying to improve the quality of care we give our Soldiers and their families. The staff members of the 121st Combat Support Hospital/18th Medical Command are committed to providing quality care to our patients. By providing your honest opinion, you can help identify what we are doing right and what improvements need to be made. We appreciate your time and effort. These comments will help us to improve services, not only for you, but for future patients and their families throughout the Korean Peninsula.

Please complete and mail this survey in OR go to
<http://www.seoul.amedd.army.mil/>
Click 'ICE' (right hand side) and click 'SP7102'
(2nd from top)

Beneficiary Counseling and
Assistance Coordinator
DSN: 736-8558/7236
COM: (02) 7916-8558/7236



MPS

COMMANDER
121ST COMBAT SUPPORT HOSPITAL
ATTN: EAMC-MC-TRICARE
UNIT: 15244
APO, AP 96205-5244



Our Mission Your Health

Phone: COM: 0505-736-8558
Web: <http://www.seoul.amedd.army.mil/>

According to our records you recently had a healthcare visit at one of our Host National Medical Treatment Facilities. Please rate the following aspects of your care and service during that visit. Please mark with an "X" in the box for the answer that is closest to your opinion.

	Completely Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Completely Agree
1. Your provider listened to you carefully about your concerns and questions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Your provider understood your problem or condition.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Your provider treated you with courtesy and respect.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Your provider explained what was being done and why.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	No Experience	Poor	Fair	Good	Very Good	Excellent
5. The amount of time you waited at the clinic to see the healthcare provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Courtesy and helpfulness of the staff during this visit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. The coordination among all the people who cared for you during this visit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. The cleanliness of the facility you visited	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. The comfort of the facility you visited	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Completely Dissatisfied	Somewhat Dissatisfied	Neither Satisfied or Dissatisfied	Somewhat Satisfied	Completely Satisfied
10. Everything considered, how satisfied were you with the facility during your visit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Overall, how satisfied do you feel about your visit with your provider?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Do you have any comments about your visit? _____

Facility Name: _____

Date Care Received: _____

Active Duty

Active Duty

Retired

Other

Family Member

Retired Family Member

Male or Female

Command Sponsored

Y or N

Thank you very much for your opinions. Please return this survey today: drop in any post mailbox (blue USPS), return to your TRICARE representative or your driver, if you used our courtesy shuttle.

Appendix D: Office of Surgeon General "Army Patient Satisfaction Survey"



DEPARTMENT OF THE ARMY
OFFICE OF THE SURGEON GENERAL
SURVEY PROGRAM OFFICE (SUITE 600)
5109 LEESBURG PIKE
FALLS CHURCH, VA 22041-3258

Please use pen or dark pencil to mark an "X" in the answer box.

Correct Incorrect
EXAMPLES: ☒ ☐ ☐ ☒

Please return your completed question name in the enclosed envelope to: P.O. Box 5033, Chicago, IL 60680

Army Patient Satisfaction Survey

We need your help. We are trying to improve the quality of care we give our Soldiers and their families.

According to our records you recently had a healthcare visit with (PROVIDER'S NAME) on (VISIT DATE) at the hospital. Is this correct?

- Yes..... ☐ → Please continue with the survey.
No, saw someone else... ☐ → Please continue with Q9.
No, didn't have visit ☐ → Please stop and return your survey now.

Thinking specifically about your visit with (PROVIDER'S NAME) on (VISIT DATE) at the hospital please rate how much you disagree or agree with each of the following. Please mark an "X" in the box for the answer that is closest to your opinion.

	Completely Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Completely Agree
1. This provider, (PROVIDER'S NAME), spent the time with you that your medical problem required.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. This provider listened to you carefully about your concerns and questions.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. This provider understood your problem or condition.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. This provider treated you with courtesy and respect.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. This provider explained what was being done and why.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. This provider helped you with your problem.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Completely Dissatisfied	Somewhat Dissatisfied	Neither Satisfied nor Dissatisfied	Somewhat Satisfied	Completely Satisfied
7. Overall, how satisfied do you feel about your visit with (PROVIDER'S NAME)?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Which of the following best describes your familiarity with (PROVIDER'S NAME)?					
This provider is my Primary Care Manager (PCM) whom I see for most of my routine care.....	<input type="checkbox"/>				
This provider is not my PCM, but I had met or heard of him/her before this visit.....	<input type="checkbox"/>				
This provider is not my PCM, I had a referral to see this provider.....	<input type="checkbox"/>				
This provider is not my PCM, and I had never met or heard of him/her before this visit.....	<input type="checkbox"/>				

Please turn over and continue on the back page.

Appendix D: Office of Surgeon General "Army Patient Satisfaction Survey" (back)

Please tell us how you were treated by staff before and after you saw the healthcare provider. Still thinking about your visit with (PROVIDER'S NAME) on (VISIT DATE), please rate the following aspects of your care and service during that visit:

	<u>No Experience</u>	<u>Poor</u>	<u>Fair</u>	<u>Good</u>	<u>Very Good</u>	<u>Excellent</u>
9. The overall phone service you received in scheduling the appointment for this visit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. How well your needs and schedule were taken into consideration when this appointment was scheduled.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. The amount of time from when you made the appointment until you actually saw the healthcare provider.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. The amount of time you waited at the clinic to see the healthcare provider.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Courtesy and helpfulness of the staff during this visit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. The coordination among all the people who cared for you during this visit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. The cleanliness of the facility you visited.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. The comfort of the facility you visited.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. The convenience of the facility you visited.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you also went to the Pharmacy, Laboratory or Radiology Department in conjunction with your visit on (VISIT DATE), please rate your experience with these services:

	<u>No Experience</u>	<u>Poor</u>	<u>Fair</u>	<u>Good</u>	<u>Very Good</u>	<u>Excellent</u>
18. Overall, how would you rate your visit to the Pharmacy?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Overall, how would you rate your visit to the Laboratory?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Overall, how would you rate your visit to the Radiology Department?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Do you have any comments about your visit with (PROVIDER'S NAME) on (VISIT DATE)?


21. Everything considered, how satisfied were you with hospital during this visit?

<u>Completely Dissatisfied</u>	<u>Somewhat Dissatisfied</u>	<u>Neither Satisfied nor Dissatisfied</u>	<u>Somewhat Satisfied</u>	<u>Completely Satisfied</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thank you very much for your opinions. Please return this survey today in the self-addressed envelope.

ATTN: AMEDD SURVEY CENTER
P.O. BOX 5033
CHICAGO, IL 60680

Appendix E: Interactive Customer Evaluation Host Nation Referral Comment Card

ICE Interactive Customer Evaluation		Home · About ICE · Manager Login · Help	
Service Provider Search:		Go	
Home » Yongsan Army Post » Health » Comment Card			
121st General Hospital/Host Nation Referral Comment Card			
Welcome to the 18th MEDCOM Interactive Customer Evaluation system. We welcome any Compliment or Concern that you may have for the 121st General Hospital.			
People don't care how much you know, until they know how much you care.			
 Information about this service provider (FAQs, Events, Contacts, Links)			
Customer Service:			
Facility Appearance	<input type="radio"/> Excellent	<input type="radio"/> Good	<input type="radio"/> OK <input type="radio"/> Poor <input type="radio"/> Awful <input checked="" type="radio"/> N/A
Employee/Staff Attitude	<input type="radio"/> Excellent	<input type="radio"/> Good	<input type="radio"/> OK <input type="radio"/> Poor <input type="radio"/> Awful <input checked="" type="radio"/> N/A
Timeliness of Service	<input type="radio"/> Excellent	<input type="radio"/> Good	<input type="radio"/> OK <input type="radio"/> Poor <input type="radio"/> Awful <input checked="" type="radio"/> N/A
Hours of Service	<input type="radio"/> Excellent	<input type="radio"/> Good	<input type="radio"/> OK <input type="radio"/> Poor <input type="radio"/> Awful <input checked="" type="radio"/> N/A
Did the product or service meet your needs?	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A		
Your provider listened to you carefully about your concerns and questions.	<input type="radio"/> Excellent	<input type="radio"/> Good	<input type="radio"/> OK <input type="radio"/> Poor <input type="radio"/> Awful <input checked="" type="radio"/> N/A
The provider understood your problem or condition.	<input type="radio"/> Excellent	<input type="radio"/> Good	<input type="radio"/> OK <input type="radio"/> Poor <input type="radio"/> Awful <input checked="" type="radio"/> N/A
The provider treated you with courtesy and respect	<input type="radio"/> Excellent	<input type="radio"/> Good	<input type="radio"/> OK <input type="radio"/> Poor <input type="radio"/> Awful <input checked="" type="radio"/> N/A
The provider explained what was being done and why	<input type="radio"/> Excellent	<input type="radio"/> Good	<input type="radio"/> OK <input type="radio"/> Poor <input type="radio"/> Awful <input checked="" type="radio"/> N/A
The amount of time you waited at the clinic to see the healthcare provider	<input type="radio"/> No Experience	<input type="radio"/> Poor	<input type="radio"/> Fair <input type="radio"/> Good <input type="radio"/> Very Good <input type="radio"/> Excellent <input checked="" type="radio"/> N/A
Courtesy and helpfulness of the staff during this visit	<input type="radio"/> No Experience	<input type="radio"/> Poor	<input type="radio"/> Fair <input type="radio"/> Good <input type="radio"/> Very Good <input type="radio"/> Excellent <input checked="" type="radio"/> N/A
The coordination among all the people who cared for you during this visit	<input type="radio"/> No Experience	<input type="radio"/> Poor	<input type="radio"/> Fair <input type="radio"/> Good <input type="radio"/> Very Good <input type="radio"/> Excellent <input checked="" type="radio"/> N/A
The cleanliness of the facility you visited	<input type="radio"/> No Experience	<input type="radio"/> Poor	<input type="radio"/> Fair <input type="radio"/> Good <input type="radio"/> Very Good <input type="radio"/> Excellent <input checked="" type="radio"/> N/A
The comfort of the facility you visited	<input type="radio"/> No Experience	<input type="radio"/> Poor	<input type="radio"/> Fair <input type="radio"/> Good <input type="radio"/> Very Good <input type="radio"/> Excellent <input checked="" type="radio"/> N/A
Everything considered, how satisfied were you with the facility during your visit	<input type="radio"/> Completely Dissatisfied <input type="radio"/> Somewhat Dissatisfied <input type="radio"/> Neither Satisfied/Dissatisfied <input type="radio"/> Somewhat Satisfied <input type="radio"/> Completely Satisfied <input checked="" type="radio"/> N/A		
Overall, how satisfied do you feel about your visit with your provider	<input type="radio"/> Completely Dissatisfied <input type="radio"/> Somewhat Dissatisfied <input type="radio"/> Neither Satisfied/Dissatisfied <input type="radio"/> Somewhat Satisfied <input type="radio"/> Completely Satisfied <input checked="" type="radio"/> N/A		
Please indicate your status	<input type="radio"/> Active Duty <input type="radio"/> Family Member - Active Duty <input type="radio"/> Retired <input type="radio"/> Family Member - Retired <input checked="" type="radio"/> N/A		
Please indicate your gender	<input type="radio"/> Male <input type="radio"/> Female <input checked="" type="radio"/> N/A		
Are you Command Sponsored	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A		
Name of Facility or Hospital you visited	<input type="text"/>		

Appendix F: Information Paper on Appointment Shortages

**U.S. Army Hospital-Yongsan
Appointment Shortage Information Paper**

The United States Army Hospital-Yongsan (USAH-Y) experienced a notable decrease in available patient appointments during October - December 2007 and January 2008; this shortage specifically affected **adult Primary Care, Neurology, Dermatology, Allergy, Podiatry, Obstetrics/Gynecology and the Behavioral Health Clinics**. In the past year, most clinics were able to take care of all beneficiary categories and did not need to prioritize appointments based on beneficiary status (NOTE: behavioral health has been limited to TRICARE Prime for the past two years). Due to the current shortage of available appointments and our inability to meet TRICARE access standards, we will now begin to prioritize access for some routine and specialty care appointments.

The United States Army Hospital-Yongsan access priorities will follow DoD guidelines and are as follows:

1. TRICARE Prime Active Duty Service Members
2. TRICARE Prime Active Duty Family Members
3. TRICARE Plus (enrolled non-command sponsored Active Duty Family members and grandfathered Retirees and their Family Members)
4. Other Active Duty Family Members (TRICARE Standard)
5. Other Retirees and their Family Members (Non-TRICARE Plus)
6. All other beneficiaries (Pay Patients -- GS, NAF, DoDDS employees, etc.)

Priority 5 and 6 patients will be offered primary care appointments on a space-available basis until the affected clinics reach normal capacity and have the available appointments to accommodate the entire patient population. Priority 5 retirees and their family members may be booked into unfilled routine or specialty appointments up to one week prior to the appointment. Priority 6 patients may be booked into unfilled routine or specialty appointments up to 72 hours prior to the appointment.

Telephone renewals of current medications may be possible for certain patients; but if a clinic visit is required to fill or refill medications, then Priority 5 and 6 patients may be required to make an appointment with a physician at an outside facility (preferably a Korean MOU Hospital) unless a space-available appointment becomes available.

Additional clinical providers have been hired, and they are now on board and working in our Primary Care clinics; more providers will be hired in the near future. We anticipate this appointment shortage will ease by April 2008 as additional providers are integrated into the hospital staff, and our existing backlog of appointments is eliminated. Once we have a sufficient number of appointments to meet demand, our hospital PAO will inform the community.

The 18th Medical Command has agreements with many host nation medical facilities. Patients who are unable to obtain an appointment may obtain primary care and specialty care appointments from one of these Korean MOU Hospitals. Those beneficiaries who choose to utilize this option may visit the 18th MEDCOM MOU Hospital webpage at http://www.seoul.amedd.army.mil/sites/mou_hosp/index.htm for the list of current USFK/18th MEDCOM Korean MOU Hospitals. Non-TRICARE patients should expect to pay up-front fees for the care they receive in MOU Hospitals, and TRICARE standard patients should expect to pay their co-pay up-front.

We truly apologize that we are required to resort to these drastic measures in order to provide care to our DoD beneficiaries, and your patience is appreciated as we grow our workforce to meet the demands of USFK throughout the Korean Peninsula. It is our primary mission and goal to provide quality, safe, and accessible care to our patients -- and we are optimistic that we will be able to restore our open access in the near future.

Approved by COL Greg Jolissaint
Commander, USAH-YongSan
As of 25 January 2008

Appendix G: APLSS Validity Information Paper from Synovate Company (1/6)

Validity of the APLSS Survey (Synovate Healthcare, 2007)

Validity in survey instruments is the property that they measure consistently the domains of content that they are intended to measure. Validity is not typically represented by a single coefficient, but is indicated instead by an accumulation of evidence that the items and the summary indices derived from them make sense (face validity), produce scores that discriminate among persons or objects known to differ (discriminant validity), are stable over time (reliability or internal consistency), respond appropriately to changes in the underlying environment (dynamic validity), and are correlated with other measures that they should be based on theory and experience (concurrent validity). To that could be added actionability, or practical validity, which is the usefulness of the information in guiding effective action. The APLSS and WTU surveys are discussed below with respect to these indicators of validity.

APLSS Survey

The APLSS questionnaire was designed to meet the following objectives:

- Measure overall satisfaction with the provider and overall satisfaction with visit including provider and all services.
- Provide drivers of quality measures for improving the interaction between providers and their patients.
- Monitor performance for key aspects of access and service provided by facilities.

The validity of the APLSS questionnaire can be evaluated by the following indicators:

- The questionnaire measures actionable dimensions of quality and service for AMEDD outpatient services, and in particular for the interaction between the provider and patient.
- Questionnaire dimensions and survey wording are based on standards found in the healthcare services research industry.
- Questionnaire document circulated to managers within the MHS and to users of the MHS for evaluation of question wording and actionability of information.
- Quantitative evaluation of effectiveness of drivers of satisfaction and the effect of data on provider and MTF performance.

Synovate used existing survey programs to identify key aspects of service and drivers of provider performance. The existing survey programs included the Consumer Assessment of Health Plans Survey (CAHPS) questionnaire, the Kaiser Permanente Northern California Patient Satisfaction Survey questionnaires and the Kaiser Hawaii Patient Satisfaction Survey questionnaires. These questionnaires were designed and evaluated using classical survey design techniques including cognitive evaluation, plus they have been used effectively in existing health organizations for years. Kaiser Permanente has been able to use survey results within their organization to effectively promote change and improvement, and the resulting improvements have been reflected in changes in their industry-wide measures such as CAHPS.

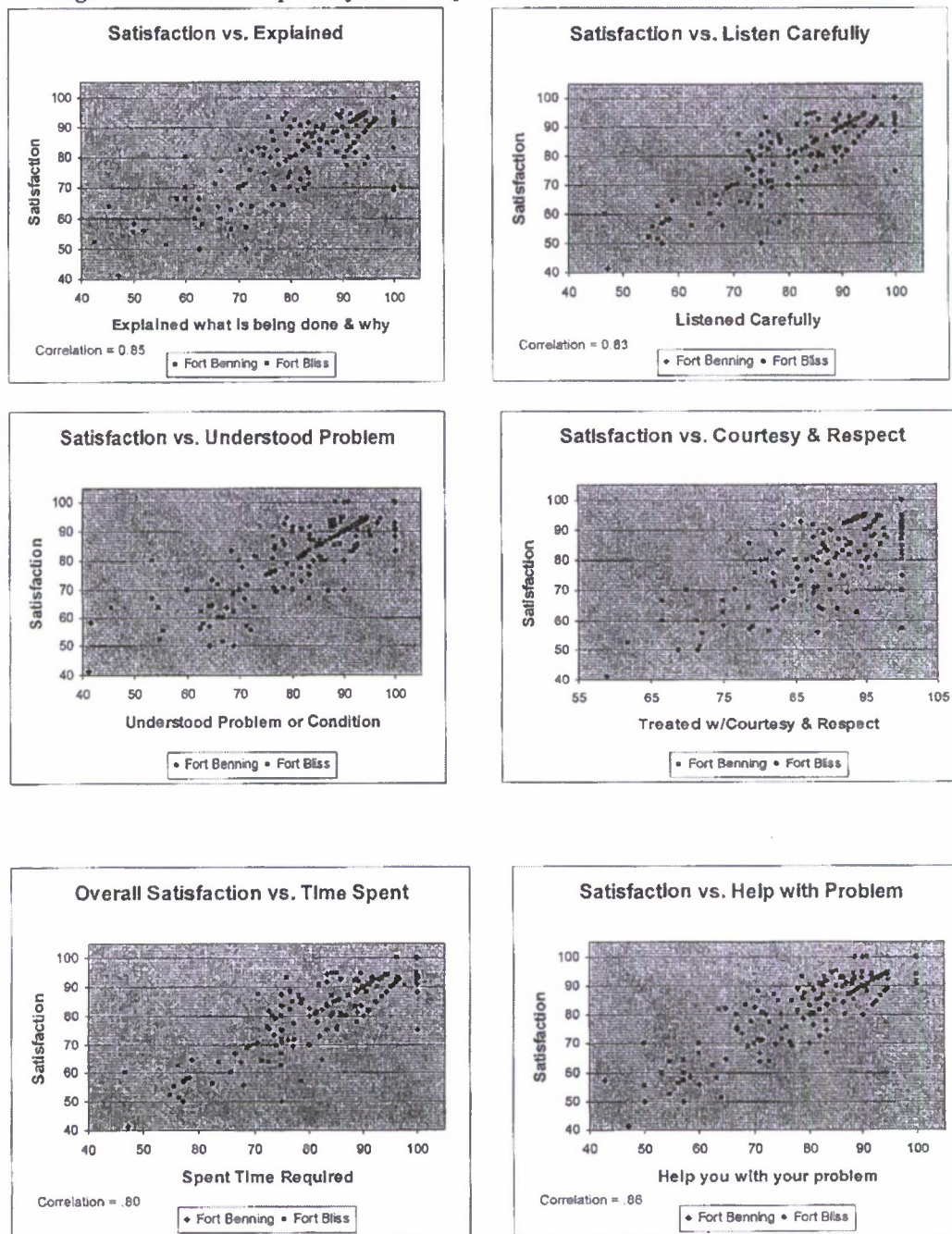
Appendix G: APLSS Validity Information Paper from Synovate Company (2/6)

Synovate drafted APLSS survey questions along with the key dimensions. The dimensions were presented to AMEDD staff, question wording were standardized according for to scale purposes, and a formatted questionnaire was drafted. The questionnaires were circulated among AMEDD managers and users of AMEDD. This included staff of the OTSG Decision Support Center and at development sites of Fort Benning and Fort Bliss. Suggestions were received and discussed among managers and users. The discussions included these topics: Can the results of this question be used to effect change or improvements in your facility? In your experience as a patient, what do you think the question is asking, and can you answer it using its current wording? This review eliminated ambiguous wording and irrelevant questions.

The survey results have undergone analytical review at different stages of the survey program. This included the pilot stage of the study in which a relationship analysis was conducted to assess whether the survey instrument can distinguish between high and low performing providers. This analysis looked at the relationships between overall scores and attribute scores for each provider. The unit of analysis is the provider itself. The relationships seen in this analysis are provided in Figure 1. Figure 1 shows that providers performing low on each dimension have low satisfaction. The relationships were not uniform suggesting some were better drivers than others, but the relationships were consistent for both Fort Benning and Fort Bliss. For all drivers analyzed, the correlations were very high ($\geq .8$), indicating substantial validity. These findings replicate similar relationships between these drivers and overall satisfaction found in surveys in the civilian healthcare services industry.

Appendix G: APLSS Validity Information Paper from Synovate Company (3/6)

Figure 1: Relationship Analysis for Key Drivers of Provider Performance

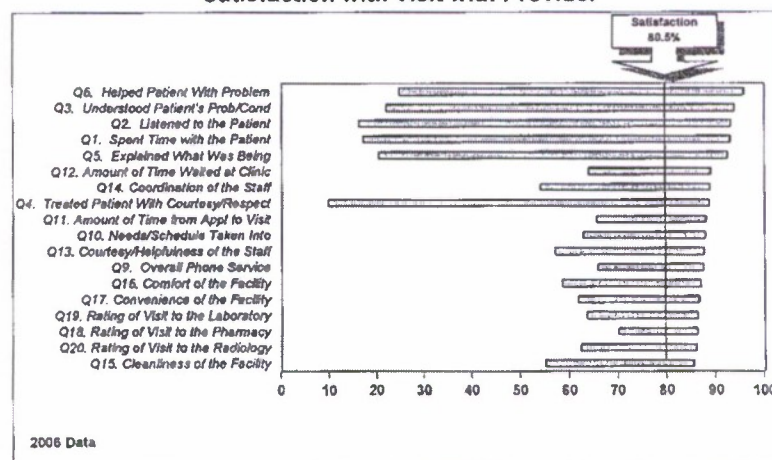


Appendix G: APLSS Validity Information Paper from Synovate Company (4/6)

A second analysis was conducted after the full roll out of the APLSS program. This analysis looks at whether respondent using the survey instrument can differentiate between drivers of provider satisfaction versus drivers of overall satisfaction. In this analysis, Synovate conducted an analysis called attributable effects. This analysis looks at attributes that drive potential gain in satisfaction and drivers of potential loss. The driver with potential gain may not be the same as a driver of potential loss. This separates out drivers that one should focus to improve scores, but it also identifies attributes that the performance should be maintained. The results are presented in Figure 2. Attributes associated with access and service were not drivers of satisfaction with provider satisfaction; however, drivers of overall satisfaction included attributes associated with access and service along with provider attributes. Specifically, it shows that improvement with the Attribute "Helps with Problem" will the greatest improvement in provider satisfaction. This agrees with the previous analysis. The analysis picks up differently on one dimension – "Courtesy and Respect." The relationship analysis shows that this is not as important an attribute as the others, but the attributable effects analysis shows that it has the greatest potential loss. That is, providers that treat their patients without courtesy and respect will have patients with low satisfaction. That intuitive result indicates the instrument's ability to capture these differences.

The attributable effects for overall satisfaction in Figure 3 shows that attributes and provider satisfaction do contribute to the overall satisfaction, but the aspects of service and access have even greater potential gain. This indicates that the instruments and the respondents understand the differences between satisfaction and service provided by the provider and satisfaction and service provided by the facility.

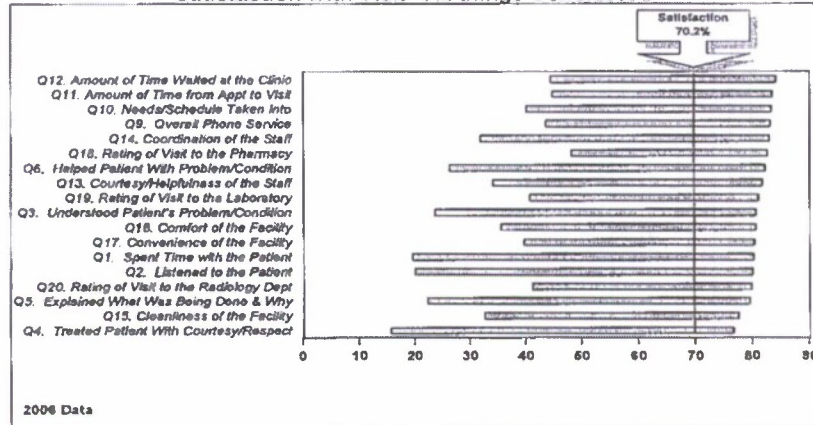
Figure 2
Attributable Effects
Satisfaction with Visit with Provider



Appendix G: APLSS Validity Information Paper from Synovate Company (5/6)

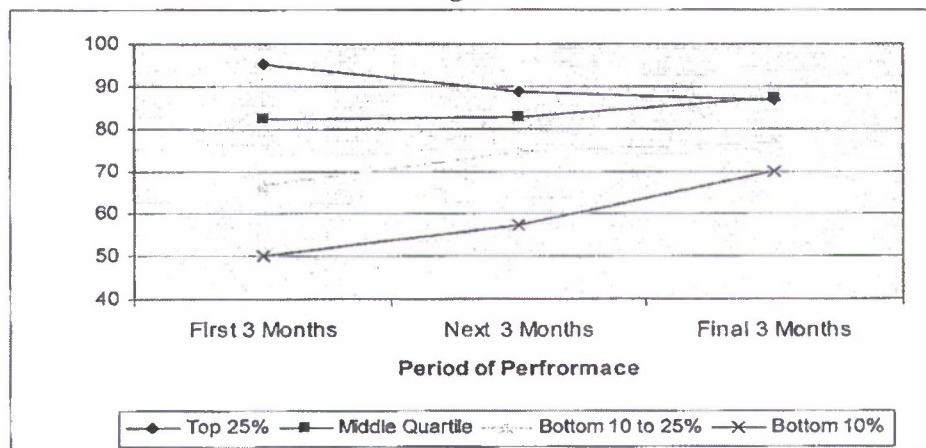
Figure 3

Attributal Effects - All Providers
Satisfaction with Visit - All things Considered



A final analysis about the underlying effectiveness of the survey program is to look at the change provider performance after they start receiving feedback. This analysis examines the performance of providers from start-up through several months into the APLSS program. An effective program provides feedback and improvement should be seen. For providers performing better than average, they should maintain their scores. If so, it show the instrument and the program is doing as expected. The new provider analysis in Figure 4 shows performance in the first 3 months of the program. The providers are grouped by the lowest performers, next lowest, middle performer and top performers. The results show that the worst performers have substantial improvement over the course of the first three quarters, and the next lowest and middle group show some improvement. The top group shows a slight decline in performance, but they still score very high.

Figure 4



Appendix G: APLSS Validity Information Paper from Synovate Company (6/6)

The development process of the questionnaires along with the subsequent analyses all validate the questionnaires and the information being collected. In addition, the program provides qualitative feedback in addition to the quantitative measures. The mail and on-line version allows respondents to give written comments on their provider's service. These comments are given directly to the provider on the web-site. The survey program provides substantial qualitative feedback about access and service. The on-line version prompts respondents for reasons they responded "fair" or "poor" on the survey. This provides input on the specific reasons for a low performance rating. These comments are sent directly to managers and commanders weekly via e-mail and they are posted on the web-site. This along with the overall measure for that attribute establishes a magnitude of the problem, and it provides exact causes of low scores.

Appendix H: Frequency Distribution Tables for MOU HNH Survey Responses (1/2)

Table 7.

Frequency Distribution for Facility Referred.

	Frequency	Percent	Cumulative Percent
Dankook	49	43	43
Dongsan	30	26.3	69.3
Samsung	35	30.7	100
Total	114	100	

Table 8.

Frequency Distribution for Beneficiary Category.

	Frequency	Percent	Cumulative Percent
AD	69	60.5	60.5
ADFM	36	31.6	92.1
RET	2	1.8	93.9
RETFM	2	1.8	95.6
Other	5	4.4	100
Total	114	100	

Table 9.

Frequency Distribution for Gender.

	Frequency	Percent	Cumulative Percent
Female	61	53.5	53.5
Male	53	46.5	100
Total	114	100	

Table 10.

Frequency Distribution for Command Sponsorship.

	Frequency	Percent	Cumulative Percent
No	19	16.7	16.7
Yes	95	83.3	100
Total	114	100	

Table 11.

Frequency Distribution for Month Care Received.

	Frequency	Percent	Cumulative Percent
September	30	26.3	26.3
October	41	36	62.3
November	43	37.7	100
Total	114	100	

Appendix H: Frequency Distribution Tables for MOU HNH Survey Responses (2/2)

Table 12.

Frequency Distribution for Q1-Your provider listened to you carefully about your concerns and questions.

	Frequency	Percent	Cumulative Percent
Score 1, 2 or 3	12	10.5	10.5
Score of 4 or 5	102	89.5	100
Total	114	100	

Table 13.

Frequency Distribution for Q6-Courtesy and helpfulness of the staff during this visit.

	Frequency	Percent	Cumulative Percent
Score 1, 2 or 3	17	14.9	14.9
Score of 4 or 5	97	85.1	100
Total	114	100	

Table 14.

Frequency Distribution for Q7-The coordination among all the people who cared for you during this visit.

	Frequency	Percent	Cumulative Percent
Score 1, 2 or 3	16	14	14
Score of 4 or 5	98	86	100
Total	114	100	

Table 15.

Frequency Distribution for Q10-Overall, how satisfied do you feel about your visit with your provider.

	Frequency	Percent	Cumulative Percent
Score 1, 2 or 3	9	7.9	7.9
Score of 4 or 5	105	92.1	100
Total	114	100	

Table 16.

Frequency Distribution for Q11-Everything considered, how satisfied were you with the facility during your visit.

	Frequency	Percent	Cumulative Percent
Score 1, 2 or 3	8	7.1	7.1
Score of 4 or 5	108	92.9	100
Total	114	100	

Appendix I: Institutional Review Board Correspondence

-----Original Message-----

From: Leighnor, Agatha Ms TAMC
Sent: Tuesday, August 14, 2007 12:25 PM
To: Hayman, Alex L MAJ 121 Combat Support Hospital
Subject: RE: Information Request (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

MAJ Hayman,

Our HUC/IRB Acting Chair, COL Donald Person, reviewed your description with attached new survey and concurs with my interpretation.

Please maintain a copy of this correspondence as written confirmation that your new survey is not research. As such, the survey is not subject to review-and-approval by the TAMC HUC/IRB.

Aloha,
Agatha

-----Original Message-----

From: Leighnor, Agatha Ms TAMC
Sent: Tuesday, August 14, 2007 5:42 AM
To: Hayman, Alex L MAJ 121 Combat Support Hospital
Subject: RE: Information Request (UNCLASSIFIED)
Importance: High

Classification: UNCLASSIFIED

Caveats: NONE

Hello MAJ Hayman,

Thank you for your inquiry. I am including LTC Lund on this email. He is the Human Protections Administrator for the 18th MEDCOM and will be pleased to know that we all want to abide with appropriate research guidelines. TAMC partners with the 18th MEDCOM as their IRB of record.

The activity described places emphasis on internal purposes/improvement rather than to develop or contribute to generalizable knowledge (research). Too, it does not involve intervention or interaction. I see no reason for it going through the IRB but will solicit opinions from others then get back with you.

Aloha,
Agatha